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## Violent Growth

Leandro Cortez

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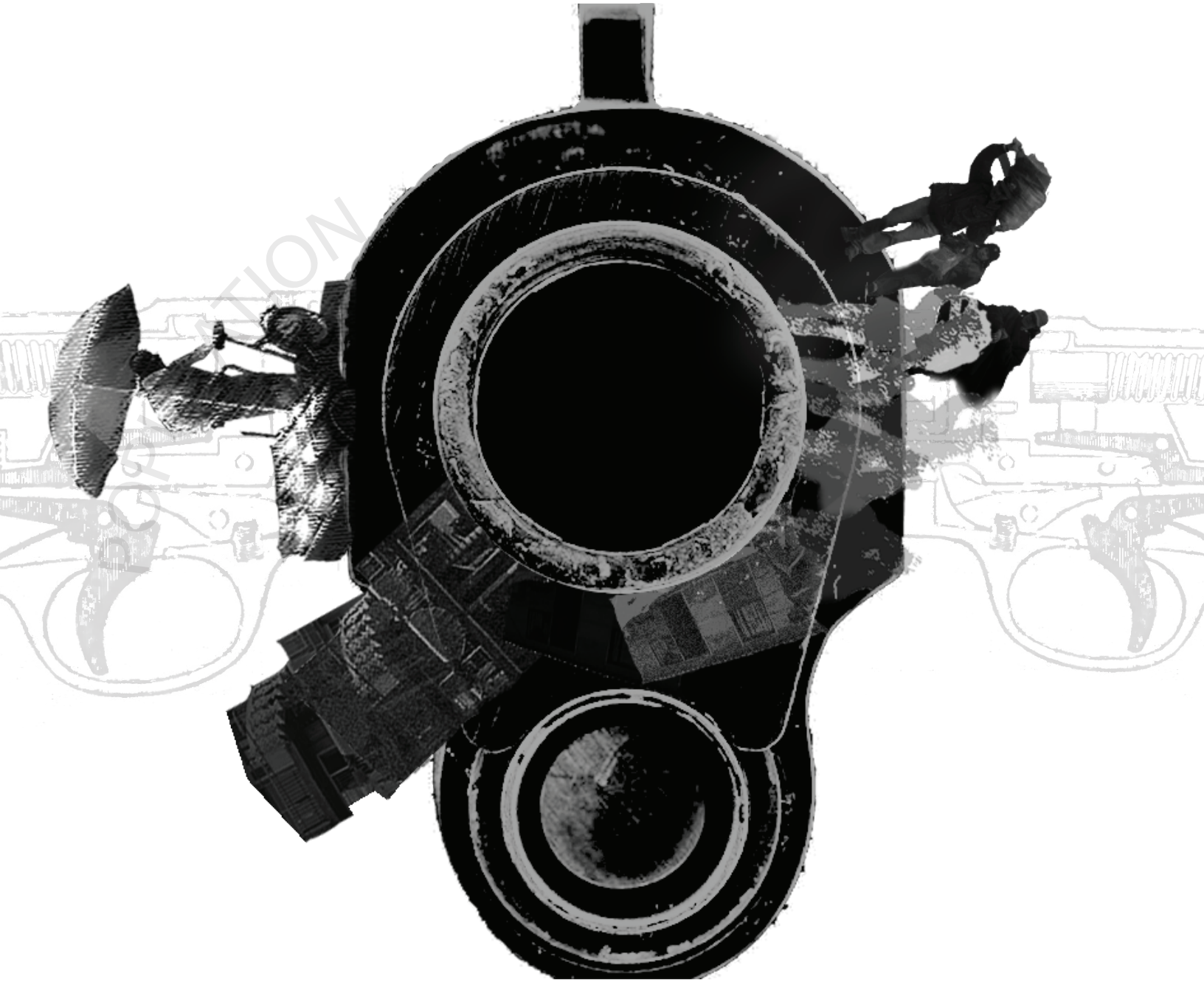
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# VIOLENT

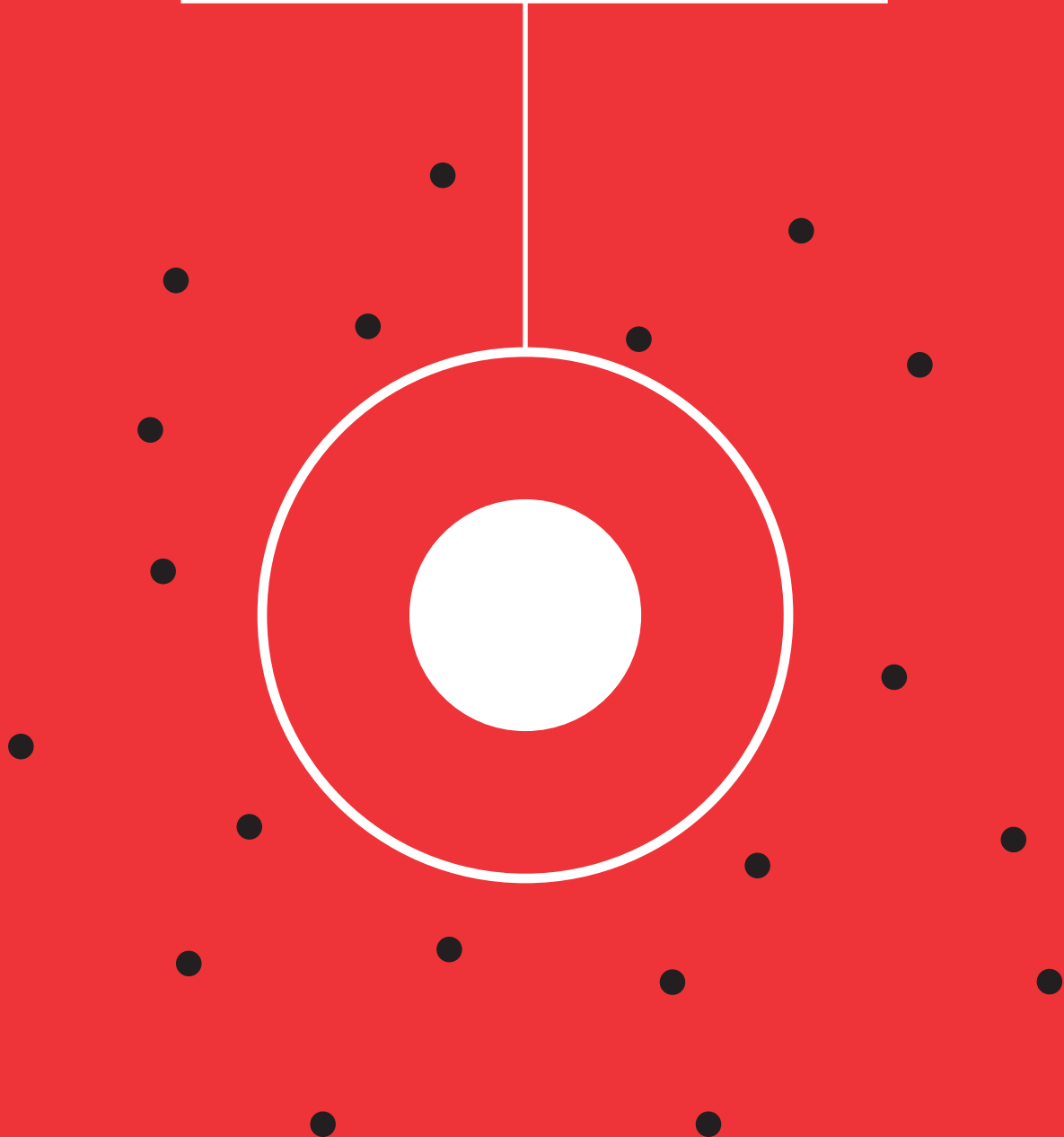


# GROWTH

LEANDRO CORTES MONTAÑO  
ADVISOR: LAWRENCE CHUA

**GENERATING MIX\_USE  
PROGRAM TO MEET THE  
HOUSING,ECONOMIC, AND  
NUTRITIVE NEEDS OF RURAL  
MIGRANTS TO THE  
URBAN PERIPHERY**

**LEANDRO CORTES M.**



**LEANDRO CORTES MONTAÑO  
ADVISOR: LAWRENCE CHUA**

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Global Periphery: Health care is non-existent in many places, there is less access to potable water than in the industrialized core, and poor infrastructure engenders slum conditions. Migration from the rural areas leads to mass population growth in urban areas.<sup>1</sup>



**Global Core:** transnational links, modern development (i.e. higher wages, access to healthcare, adequate food/water/shelter), scientific innovation, and increasing economic prosperity. These countries also tend to be highly industrialized mostly urban with a slow population growth.<sup>1</sup>

**Urban and Rural**, two words whose meaning can be observed as reciprocals of each other, have in contemporary times been placed under a new global political spectrum that has placed a deeper complexity to their constitution. The interconnection of our world through mediums like the internet, transportation infrastructure, Urban-Rural Migration, and the continuous growth of the megalopolis have led to a synergy between what we consider the city and the countryside.

1. Blij, Harm De. The Power of Place: Geography, Destiny, and Globalization's Rough Landscape. Oxford: Oxford UP, 2009. Print.

## URBAN-RURAL MIGRATION

Urban-Rural migration, brings about a complexity interlinked with architectural culture in the forms of construction practices, use of program, space allocation, and professional-client relations. This is complexity blooms from the manner in which said individuals bring their rural utilization and opinions of space upon an urban context that holds its own way of life.

Urban-Rural migration is often a "cloud term" for distinct forms of human displacement. Migration for example can be internal or external, can be forced or voluntary. It can be human perpetuated or climatic in inception. As result of so many permutations of human migration, it was necessary to pin-point a constant variable that would help understand the relationship between the urban environment and its rural counterpart

## INTERNAL MIGRATION

By choosing internal migration I could be sure that the biggest change in architectural culture would be the change from rural to urban and not nation to nation. Based on this, my next decision was to select the cause of migration.

I chose to focus on forced displacement because it creates a situation in which an individual has less chances of embarking or return migration thus allowing an analysis of how architectural culture adapts to a new environment over a longer perhaps even multi-generational span of time.

For the last portion of narrowing down the investigation I chose to mix both the issues of human and climatic reasons for migration as they are both intertwined in cause and solution. What I came to understand was that there is a category known as Internally Displaced People.

## WHAT IS AN I.D.P?

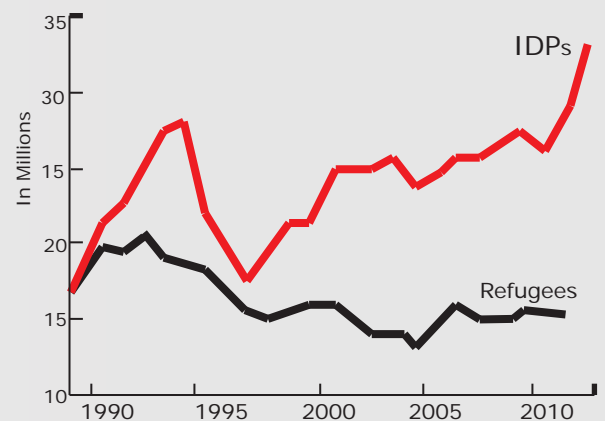
The United Nations Defines and IDP as:

Internally displaced people are "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border."<sup>2</sup>

2. United Nations, Guiding Principles on Internal Displacement, Introduction, para. 2, 1998)

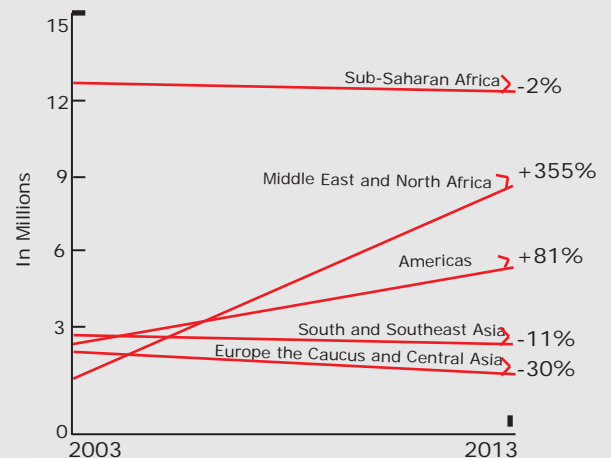
## 33.3 MILLION PEOPLE Displaced by Conflict and violence at the end of 2013

### Proportion of IDPs and refugees fleeing conflict and violence from 1989 to 2013



Source: "People Internally Displaced by Conflict and Violence." Global Overview (2014): 78. Web.

## Changes in IDP figures over the last decade



Source: "People Internally Displaced by Conflict and Violence." Global Overview (2014): 78. Web.

## A GLOBAL CRISIS

The global contextualization of this issue of Internally Displaced People is actually quite severe. To put it in numbers the Internal Displacement Overview Center states, "around 8.2 million people were newly displaced in 2013 "Sub-Saharan Africa remains the region worst affected by internal displacement caused by conflict and violence.

Within the region it is the Democratic Republic of the Congo that has the highest figures of internal displacement with "3.3 million people". Globally the country is the fourth largest country with internally displaced individuals. These statistics have been collected for the past 15 years by organizations such as the IDMC who have specialized in monitoring changes in population.

Further development of these statistics; reveal that the countries with the highest rates of internal displacement are Syria and Colombia with 6.5 million and 5.7 million respectively. Shockingly, the America's in 2013 amounted six million IDP's for a cumulative span of 15 years.

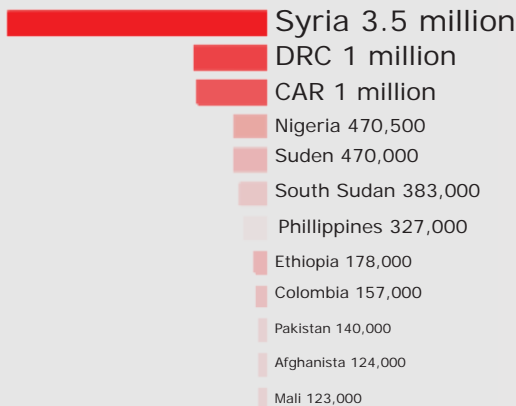
## IMMIGRANT OR IDP ?

What differentiates an internal displaced individual is then the action of being forced as opposed to immigration where it is one's own decision to move. This wording in the definition means that families are unprepared to move and as a result must establish residence in areas that often do not support the infrastructure to house them. This occurs for various reasons.

1. First, the government in charge of the people is either unorganized in providing legislations, corrupt, or is the source of the armed conflict.
2. Two, the economic means to provide housing for these people does not exist.
3. Three, there is a lack of acceptance in the urgency of meeting the needs of the IDPs.

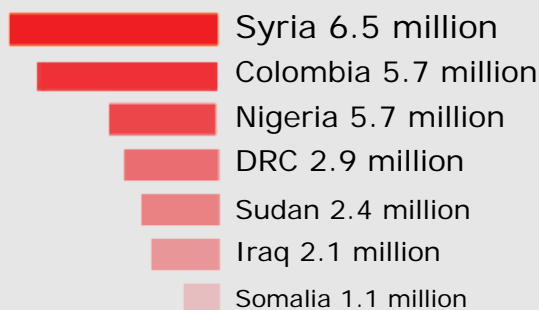
## 8.2 MILLION newly displaced in 2013

### The 12 countries with the highest displacement



Source: "People Internally Displaced by Conflict and Violence." Global Overview (2014): 78. Web.

### Countries with the LARGEST DISPLACEMENT related to conflict and violence



Source: "People Internally Displaced by Conflict and Violence." Global Overview (2014): 78. Web.



## IDP NEEDS

The needs of IDP's fluctuate per context but in general they relate to nutrition, health, and shelter. As the International Monitoring Centre published in their global review for

2014, " IDP's in urban areas tend to have less access than their impoverished neighbors to basic needs such as adequate housing, work, and education, the result of having lost personal documents or being unfamiliar with the social services available" <sup>3</sup>.

## NEEDS + POLICIES

Most policies, programs, and organizations enacted to help these individuals are then created to satisfy these basic needs. However, little though is provided to how these individuals can incorporate themselves into the mostly urban society they have been displaced to until (if they want) things are safe from their original home.

3. United Nations, Guiding Principles on Internal Displacement, Introduction, para. 2, 1998)

## IDPs + ARCHITECTURE

Architecturally, it becomes very difficult to deal with issues of Internally Displaced Individuals because they adhere to a status that is often difficult to design due to the unstable nature of their position. Nonetheless, it is possible as many precedents around the world exist.

Many projects have led in creating schools, housing, and governmental buildings to help settle these displaced communities to allow them a chance at the stability that was robbed from them in their primarily rural environment.

## THE QUESTION

My primary inquiry is to understand the ability of the profession of architecture as a profession of order and adaptation.



## PROBLEM

A population that has displaced itself into the urban environment of Colombian cities at a massive scale without skills that allows them to socially progress within this new context. Colombian cities that have traditionally not provided housing to Internally Displaced People as a result of corruption, lack of organization, money, and interest creating a disconnection between rural migrant and urban dweller. A population that builds from what they can find and wherever they can find, creating hazardous conditions for their health as a result of dangerous sites and non-adequate construction practices.

## CLAIM

I claim that the profession of Architecture allows for re-programming of the built environment to occur in such a way that the use of that program can allow for a mixture of functions to occur.

In this way the architect can meet the short term and long term needs of an IDP While incorporating them into the already established urban framework of the city highlighted by its growth.

## THESIS

The architect can generate mix\_use program by combining the economic, nutritive, and social benefits of the market with the benefits of shelter, and health provided by housing program of the dwelling.

## AN ISSUE OF CONTEXT

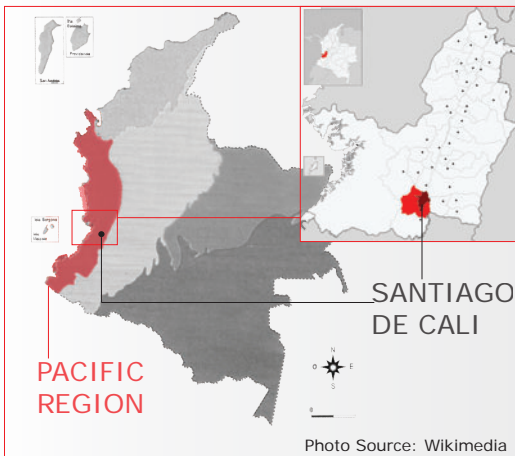
Because an Internally Displaced Person carries her or his own architectural culture derived from what their rural environment is. It is crucial to contextualize this global migratory issue upon an actual location. Furthermore, the range of urban environments that an IDP has to migrate to is so diverse that specificity is necessary to understand how architecture can organize the dialogue between these two societal elements.





## SANTIAGO DE CALI

Located in the Pacific region of the country, the city has a population of 2,398,956 people. The city has an area of 218 sq mi (564 km<sup>2</sup>) giving it a density of 11,000 people per sq mile.



The city like many others in the country is highly dense. Boundaries between rural and urban, built and agricultural, fall right next to one another. As a result, a transition from one environment to the other is very abrupt. This can be attributed to the rapid growth of the city and the lack of municipal planning to respond to said growth.

## URBAN/ RURAL BOUNDARIES

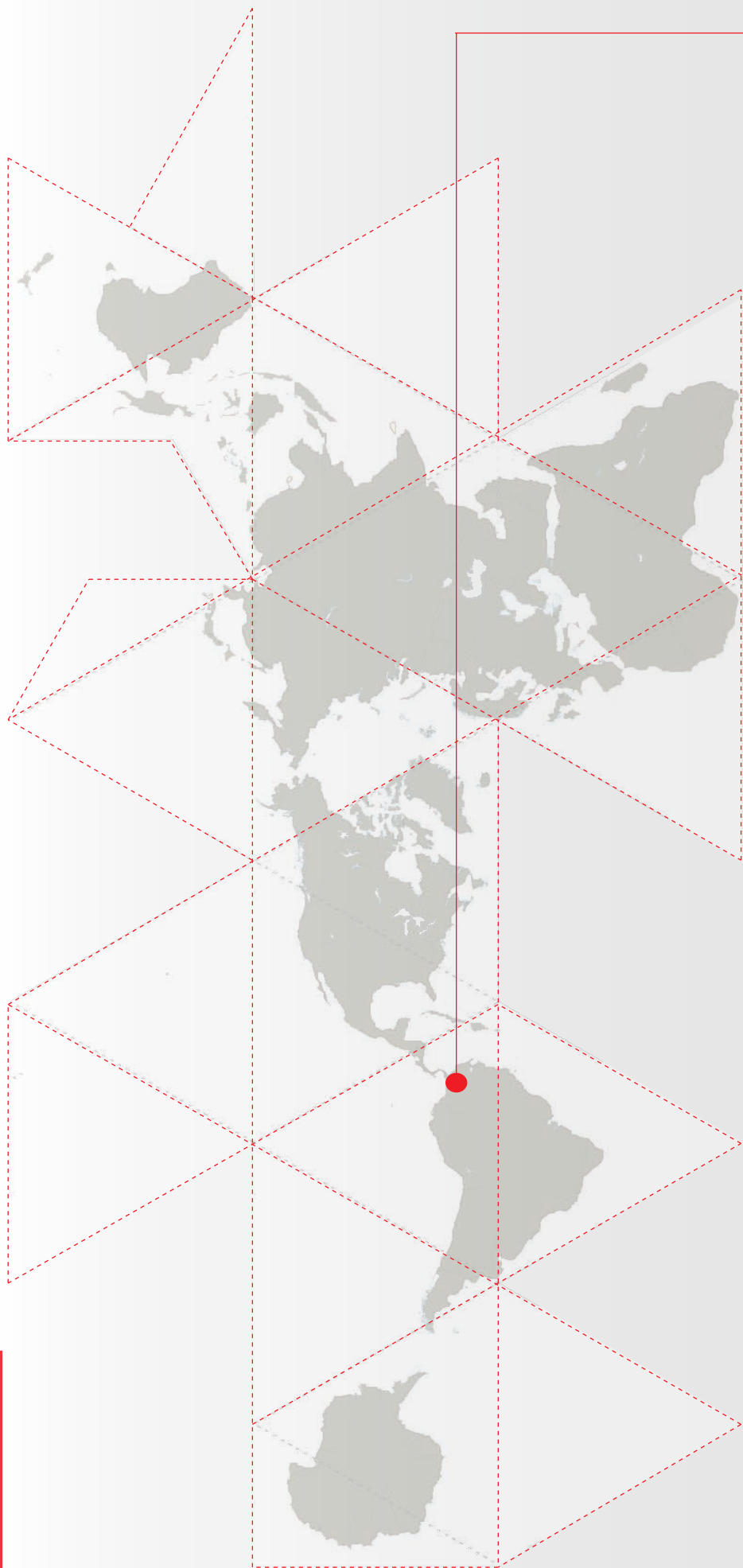
The lack of transition between rural and urban environment places homes in close proximity to zones of agriculture. Sugar cane, the primary crop of the city, is often grown at a very close proximity to the homes on the periphery of the city. These homes are located in the eastern part of the city that are either invasions built by I.D.Ps or lower income neighborhoods

## RURAL MIGRANTS

Santiago de Cali is one of the cities within the country that receives one of the highest percentages of Internally Displaced People. In 2009 alone the city received "64,458 Internally Displaced Individuals"<sup>5</sup>. I.D.Ps settle mostly in the poorer areas of the city located in the periphery because it is what is affordable to them and where land has not been claimed. This places them very close to the sugar cane agricultural zone that encompasses the city. As a report by the state government states, "I.D.Ps tend to settle in the district of Agua Blanca in the eastern portion of the city in an area close in proximity to the Cauca river and sugarcane fields"<sup>5</sup>.

5. Vida, Roberto, Clara Atehortúa, and Jorge Salcedo. "Desplazados Internos Fuera De Los Campos. El Papel De Las Autoridades Locales En Colombia. Estudio Comparado En Bogotá D.C. Y Cali." Brookings (2013): 1-26. <http://www.brookings.edu/~media/research/files/reports/2013/05/municipal%20May%202013.Web.5Dec.2014>.





## COUNTRY

The country that I have chosen for my design research is the South American Country of Colombia.



Located in the North Western Region of South America, the country borders the nations of Ecuador, Venezuela, Brazil, and Panama.

## INTERNAL DISPLACEMENT

The Internal Displacement Case for this project will focus on the country of Colombia which is ranked by the Internal Displacement Monitoring Centre and the United Nations High Commission for Refugees as the country with second largest number of Internally Displaced People in the world.

## THE ARMED CONFLICT

For 5 decades Colombia has been struggling with A 50 Year armed conflict between non-state armed groups, the paramilitary, and the Colombian army. Roots for this conflict are many but as Giselle Lopez summarizes in her article the Colombian Civil War,

" Colombia has been plagued by an internal armed conflict that is rooted in a complex history of socioeconomic inequality, political corruption, and culture of violence. Due to the state's inability to effectively address widespread instability and corruption."

-Giselle Lopez<sup>1</sup>

## HISTORY OF CONFLICTS

In order to begin, it is critical to provide some historical context to the situation of violence and inequality. It is in this way that we can understand the issue of the I.D.Ps as accumulative historic problem within the country.

1. Lopez, Giselle. "The Colombian Civil War Potential for Justice in a Culture of Violence." Policy Briefing 1.2 (2010): 9-13. 2010. Web. 6 Nov. 2014.



## THE I.D.P and THE WAR

### PRE-COLUMBIAN ERA

Three distinct civilizations existed in the territory prior to colonial conquest: "The Arawak, Muisca, and the Caribe"<sup>2</sup>. Each had its own distinctive socio-economic hierarchy and often ( Mostly the Caribe and the Muisca) engaged in war.

### COLONIAL RULE

Establishes caste system based on three racial groups: White (Spain), Black (West African) , and Indigenous. Each group is part of a socio-economic strata of society favoring the European and as a result creating racial and class inequality.

### WAR OF INDEPENDENCE

The country declares independence from Spain on July 20th, 1810

### WAR OF 1,000 DAYS

Extensive feuds between conservative and liberal parties led to a war of 1000 days in the country from (1899-1902) ending in surrender by the liberals.

### "THE VIOLENCE"

During the presidential elections of April 9, 1948 the Liberal presidential candidate Jorge Eliecer Gaitan was assassinated initiating a cycle of violence that spread in both cities and rural portions of the country. Adam Turel in his essay, *Colombia's 'La Violencia'* estimates that "one million people were displaced from their rural homes as result of the violence that ensued from the assassination"<sup>3</sup>. More importantly, this event would evolve into the creation of the FARC ( Colombian Liberation Army) and the multiple guerilla groups.

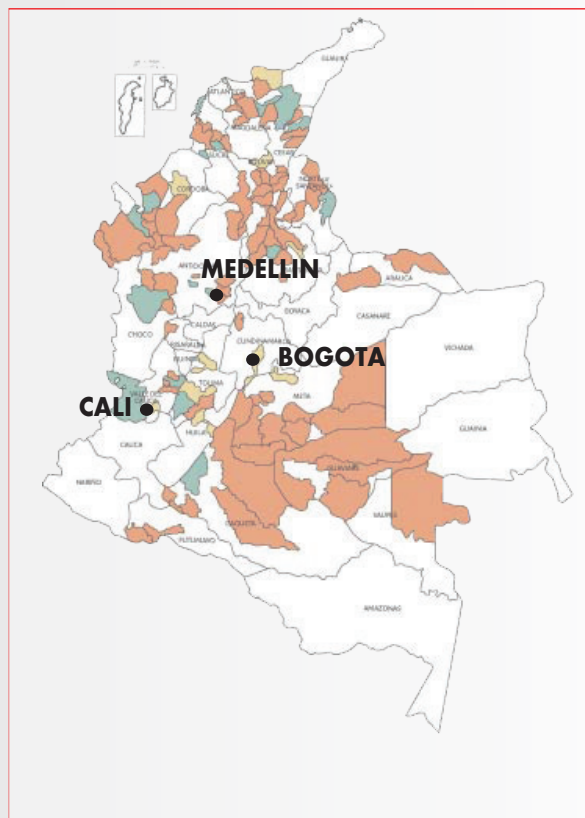
### CURRENT ARMED CONFLICT

The progressive growth of guerilla groups within the countryside lead , in the 1960's, to the current armed conflict with the country's army.

## THE I.D.P and THE WAR

While the conflict did begin in the early 1960's, it is from 1985 that IDP's have been accounted for. It is estimated that from 1985 "5.5 million people have been displaced", while as of 2013, " 156,918 newly displaced individuals have been accounted for"<sup>4</sup>. The issue in Colombia becomes racialized because as the *IDMC* in the *Global Report* states, "disproportionate numbers of indigenous and Afro-Colombians, Colombia's ethnic minorities , have been displaced in the last few years".<sup>4</sup>

## THE RURAL CONNECTION



- 16 Municipalities Displace and Receive 75% of the population
- 91 Municipalities Displace 75% of the population
- 14 Municipalities Receive 75% of the population

Source: Social Solidarity Network. National Register of displaced population.

For the past 60 years most of the warfare has occurred in the countryside within small towns and cities. Resulting in an environment that is dangerous for rural residents to inhabit. Moreover, extensive use of land-mines, child-soldiers, and forced evacuation of private land has led many without homes and in constant danger.

It is the country's three biggest cities of Bogotá, Medellín, and Cali that receive most of the internally displaced people from distinct regions of the country.

2. "Epoca precolombina." Colombia Aprende. Ministerio de Educación Nacional República de Colombia. Web. 3 December, 2014. [http://www.colombiaaprende.edu.co/html/productos/1685/articulo-139576.html#h2\\_1](http://www.colombiaaprende.edu.co/html/productos/1685/articulo-139576.html#h2_1)

3. Turel, Adam. Colombia's 'La Violencia' and How It Shaped the Country's Political System. E-International Relations Students. University of the West of England. 20 Mar. 2013. Web. 3 Dec. 2014. <http://www.e-ir.info/2013/03/20/colombias-la-violencia-and-how-it-shaped-the-countrys-political-system/>.

4. "IDMC » Colombia: Internal displacement in brief." IDMC » Colombia: Internal displacement in brief. N.p., n.d.Web. 22 Sept. 2014. <http://www.internal-displacement.org/americas/colombia/summ8>.



Photo Source: Wikimedia

## HISTORICAL BINARIES

Historically the city of Cali has grown between an environment of the urban and the agricultural. Beginning with its Spanish colonial creation the city was always in close proximity to the sugarcane producing haciendas of the area. The city remained functioning in this manner until the late 19th century.

As the growth of the city continued, haciendas became swallowed into the urban fabric of the city. Nonetheless, sugarcane cultivation and other forms of agriculture adapted to the expanding boundaries of the city. Interestingly enough, the boundary of the city never left that of the agricultural zone. The two in essence depended on one another.

## INVASIONS OF SUGAR

The time of 'La Violencia' led to the first instance of Internally Displaced Individuals. It was during this time that rural migrants began to move to the city in large numbers. They could not afford areas within the actual city so they had to settle in the periphery where the sugar cane fields were also located.

Not all chose to settle in the fields and as a result settled in the nearby hill sides. These areas became known as invasions and with the onset of the internal conflict began to grow at a rapid pace.

The dwellings of these individuals increased the density of the city but also led to the construction of more markets, hospitals, and other forms of infrastructure.

## ZONES OF INVASION

Source: Government of Santiago de Cali  
Department of Urban Planning and  
Public Services

Data: Historia del Desarrollo Económico  
y Urbano en Cali.

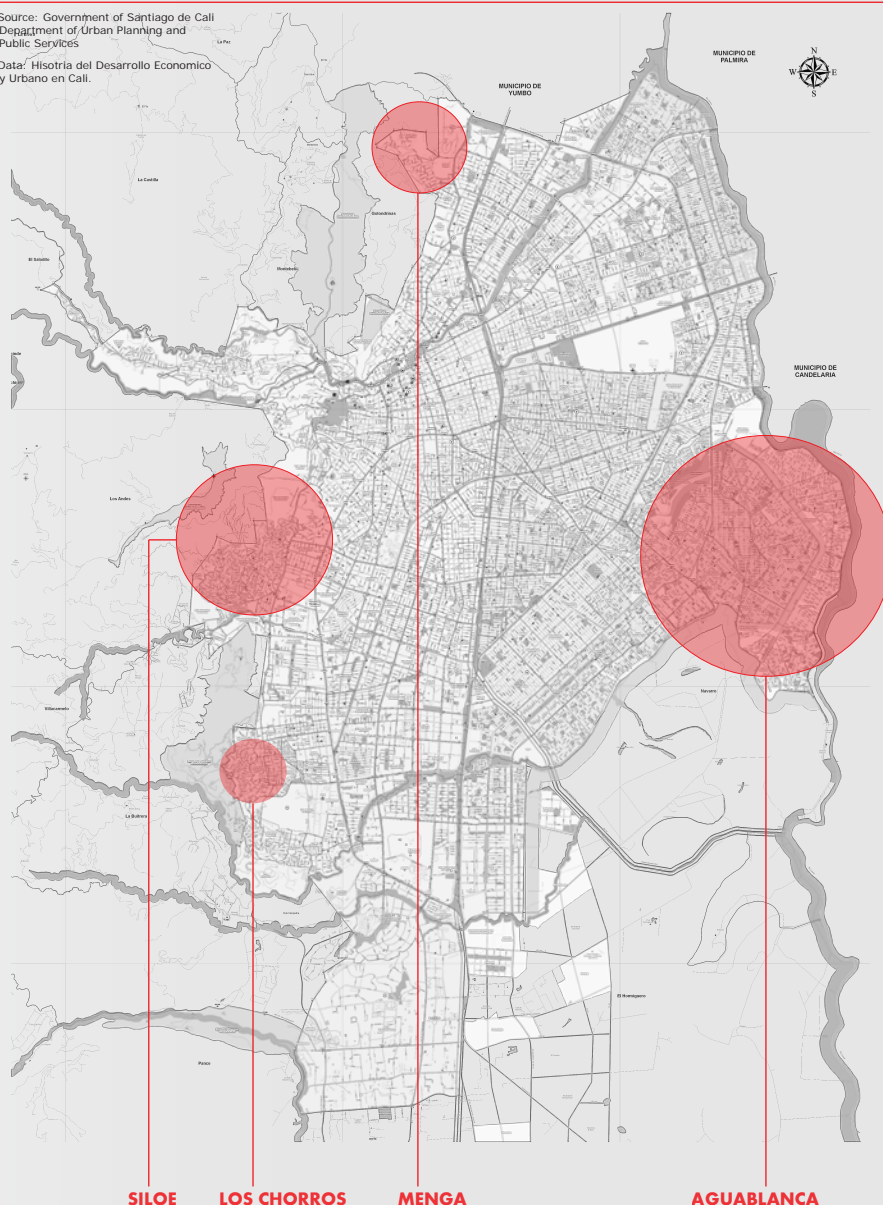


Photo by: Fondo Adaptación



## WHO ARE THESE I.D.P.s?

7.08% of the people displaced are of indigenous background.

22.5% of the people displaced are of Afro-Colombian background.

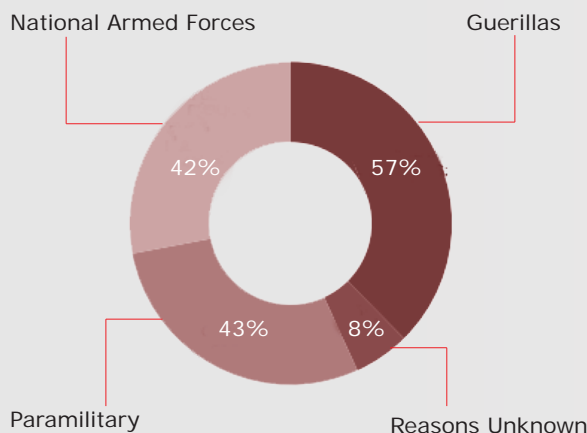
70.42% of the people displaced are of mixed and white background.

Biggest reasons for displacement are  
Homes are in zones of armed clashes: 58%  
Threats: 21.7%  
Homicides: 21%

The above statistics are from the year 2012 and were taken from CODHES ( Consultoria para los derechos humanos y el Desplazamiento)<sup>6</sup>.

6. Silva, Marco, Sonia Londoño, María Angélica Gómez, Gabriel Rojas, Hélder Quiroga, Ariel Palacios, Patricia Tobón, Marcos Oyaga, and Bibiana Ortiz. "LA CRISIS HUMANITARIA EN COLOMBIA PERSISTE. EL PACÍFICO EN DISPUTA. Informe De Desplazamiento Forzado En 2012." CODHES 26 (2012): 1-93. Web. 5 Dec. 2014. <<http://www.livcolombia.org.co/sites/default/files/image/310513%20Informe%20%20desplazamiento%202012.pdf>>.

## REASONS FOR DISPLACEMENT



Source: "LA CRISIS HUMANITARIA EN COLOMBIA PERSISTE. EL PACÍFICO EN DISPUTA. Informe De Desplazamiento Forzado En 2012." CODHES



Photo by: Fernando Vergara / AP



Photo by: El País

## I.D.P LABOR

The city of Cali attracts large percentages of internally displaced people because of its existence as a "political, economic, industrial, cultural , urban hub within the pacific region. It is the closest city within a region that has been heavily affected by the armed conflict"<sup>6</sup>. Possibilities for labor are abundant whether this is formal or informal labor within the streets or in the local markets.

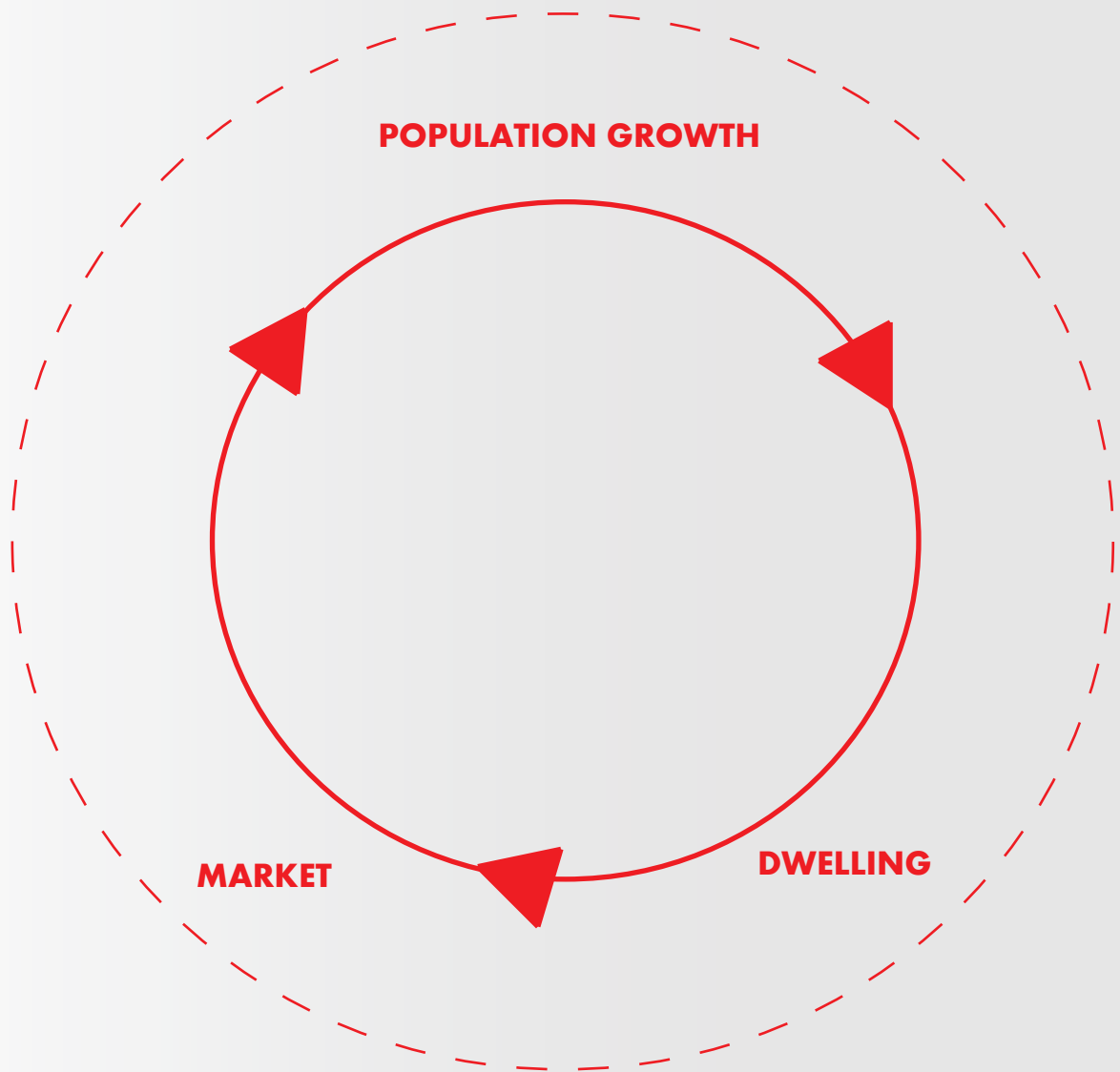
Settlement of the internally displaced people "builds upon a situation that the infrastructural system of the city has not been able to repair". Moreover, the background of these individuals is one of illiteracy and absolute poverty.

Most of the skills of these individuals deal with agricultural or cultural handicraft productions. As a result of little education and applicable skills, most of the I.D.Ps when moving to the city can only take jobs of informal capacity. Most of these jobs deal with the selling of agricultural and material products in the market, street, and even in their own homes.

Once a rural family moves to the city and begins to make money they tell their extended family in the countryside and they eventually move. This system of invitation based on economic success has been utilized by I.D.Ps for family members who for some reason stayed behind to wait out the conflict in their home town. More importantly, it is one that is directly connected to economic income of an individual.

## INEQUALITY

## POPULATION GROWTH



### POPULATION GROWTH

Population growth in the city from the 1950's onward skyrocketed as result of the extremely violent conditions that began to develop in the countryside. From "1951 to 2015 the population went from 328,841 to 2,398,956"<sup>6</sup>.

### DWELLING

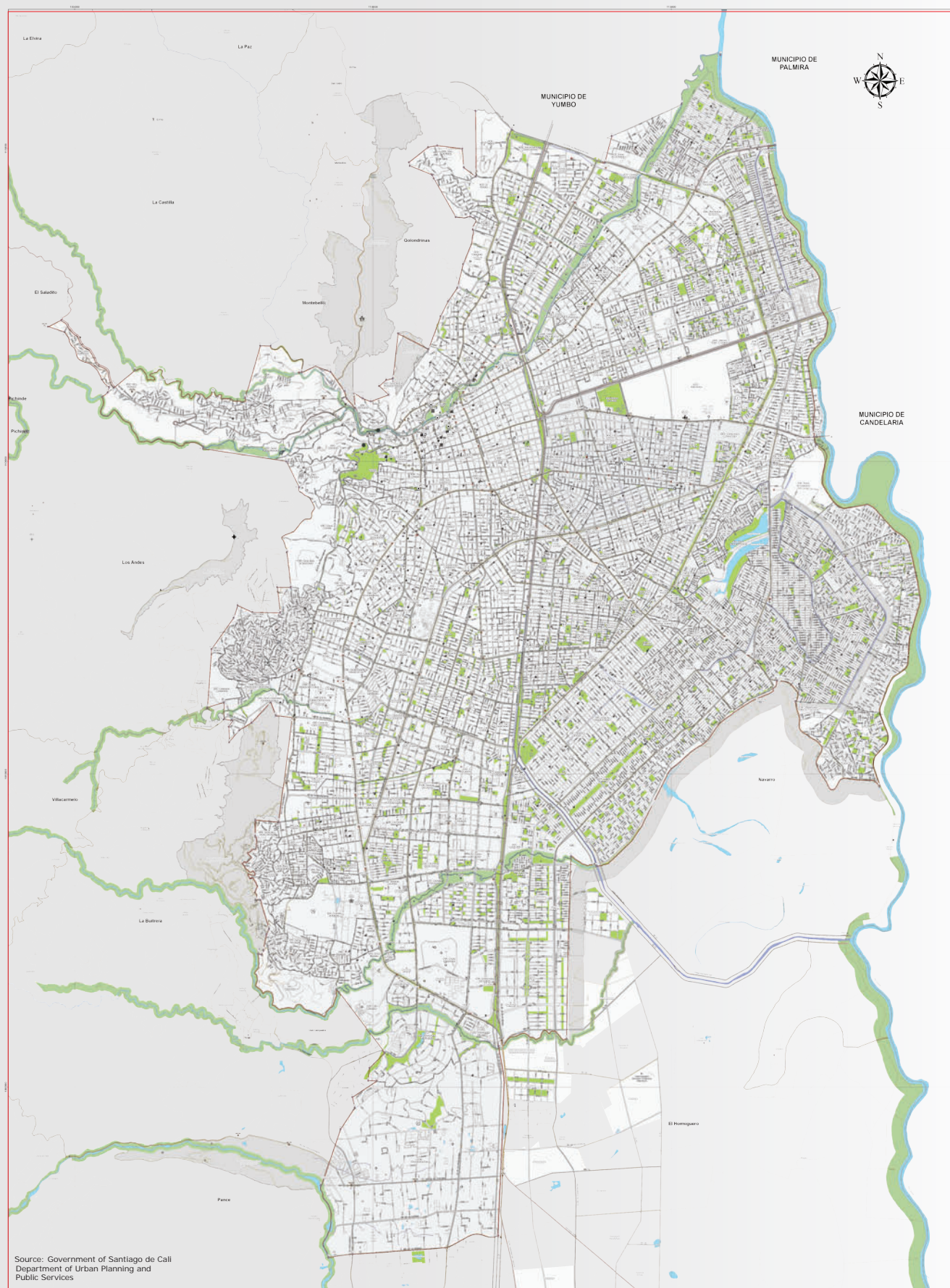
Population growth in the city of Cali created a condition in which internally displaced individuals began to construct dwellings in an informal manner. This occurred because the city government was not able to provide housing at the same rate that migrants were coming into the city.

The construction of these invasion settlements went alongside the city's planned housing and urban strategies through both lot provided homes and encouraging the construction of commercial homes by private companies. As result the city grew both in a planned and informal fashion.

6. Vida, Roberto, Clara Atehortúa, and Jorge Salcedo. "Desplazados Internos Fuera De Los Campos. El Papel De Las Autoridades Locales En Colombia. Estudio Comparado En Bogotá D.C. Y Cali." Brookings (2013): 1-26. <http://www.brookings.edu/~media/research/files/reports/2013/05/municipal%20May%202013>. Web. 5 Dec. 2014.



# MAP OF SANTIAGO DE CALI

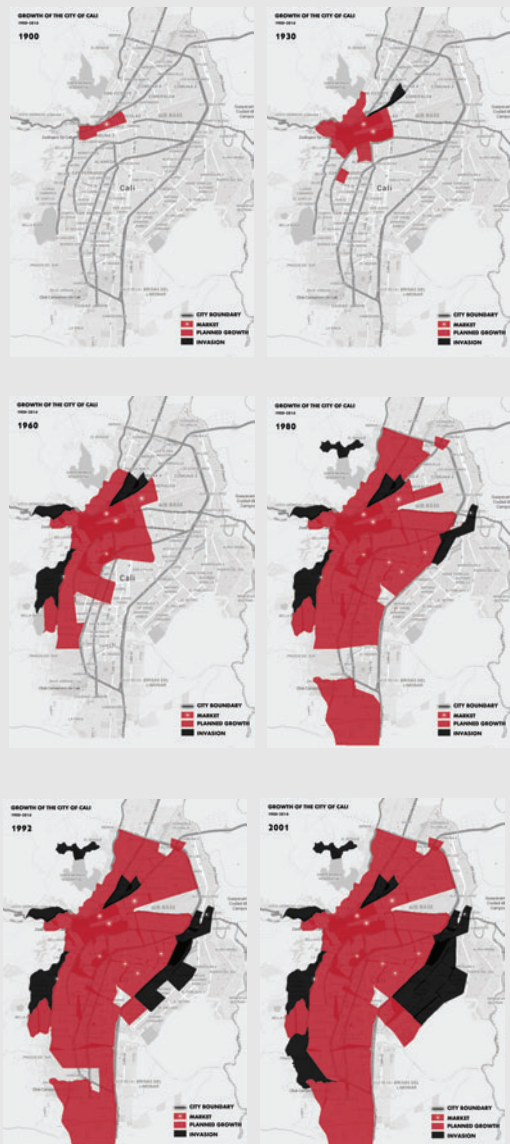


0ft 1640ft 3280ft 6561ft

SCALE: 1 in = 3,280 ft  
1 in = .62 Miles

- Rural Road
- Municipal Perimeter
- Urban Perimeter
- Neighborhood Perimeter
- Main Street
- Secondary Street Line
- Interstate Road
- Body of Water
- Canal
- Protected Forest
- Ecological Belt
- Park and Protected Area
- Recreational Nature Park

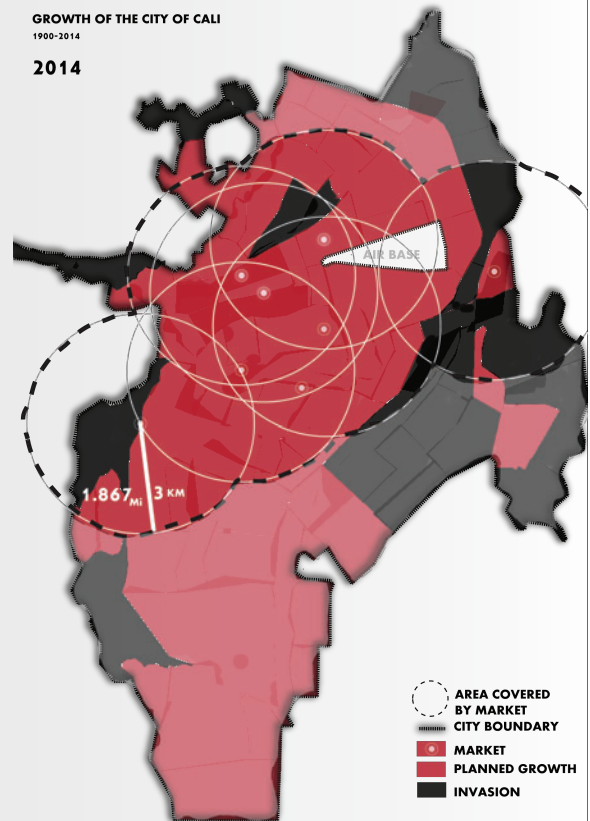
## GROWTH OF THE CITY OF SANTIAGO DE CALI



### CITY MARKET

The construction of markets and their placement throughout the city went in a ratio that was in proportion to the growth of the city and the physical expansion of the urban fabric through the construction of dwellings. The markets were also the first place where these individuals found their jobs as it was an area that allowed high economic profit from a low set of skills. Moreover, the agriculture based profit made sense to those who may have grown up cultivating their own land.

When a family unit gained enough money from a job in the market they often encourage those back home to move to the city as well, thus creating a cycle.



Data Source: Vasquez, Edgar. "Historia del Desarrollo Economico y Urbano en Cali" Buletin Economico . 20 (1990): 1-26. Print.

Diagram Source: Leandro Cortes Montano

### INEQUALITY

The issue of inequality is one evidenced through architecture and more specifically housing. This is because while housing is being provided to a portion of society not enough is being built for the accommodation of the Internally Displaced People.

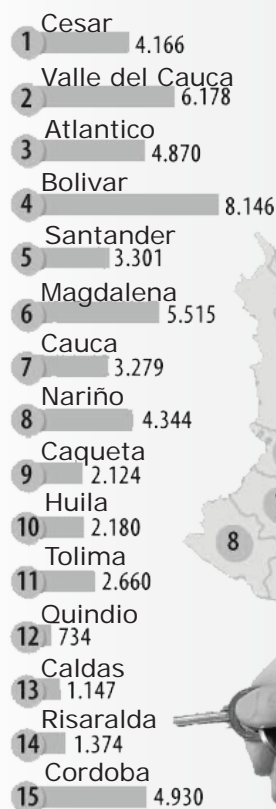
One can view this inequality through construction processes, choice in materials, and adaptations in program.



## GOVERNMENT PROVIDED HOUSING

It is evident that the IDP issue in the city of Santiago de Cali is quite precarious. Nonetheless, the city/country has developed legal framework corresponding to internal displacement. This has occurred thanks to cooperation at the governmental level with the constitutional court and civil society. Internally Displaced People for example have "been given access to regular social welfare programmes" <sup>7</sup>:

## PANORAMA OF HOUSING PROJECT



Source: Ministry of Housing-Fidubogota

National level response to IDP's has improved but local level response is a bit delayed because "local authorities are over-burdened". The challenge lies in the reinstitution of land for those that argue a case of re-appropriation while those who wish to reside in the urban areas are currently being included in a program by the president to obtain federal provided housing.

## 100,000 HOMES

Through government sponsored programs such as the DPS ( Department for Social Prosperity) and the organization Anspe, have invested close to 200 million pesos ( ) for the development of "100,000 homes for internally displaced people" <sup>8</sup>:



**\$4 BILLION**  
(COL PESO)

### Plazos\*

#### Stage 1

10th of September  
- Homes built by through a private sector would be bought by the government to re-distribute.

#### Stage 2

21st of September  
- Homes would be built in public lots bought by the national government.  
- 921 lots have been bought in 473 Municipalities within the 30 states of the country.

(\$17,382 USD)

**39,6**

MILLION  
(COL PESO)

Amount Fidubogota will provide for the construction of each home.

- Number of homes to construct
- Date for moving into the homes
- Area of each home ( min 430.56 sq ft)
- Value per sq ft.
- Roads to connect with the urban fabric
- Roads within the housing project
- Aqueduct infrastructure
- Black water infrastructure
- Energy

\* Original dates have moved by 10 days

## THE PROGRAM IN CALI: "LLANO VERDE"

The project is currently advancing in "223 municipalities with a total of 310 projects, 3000 homes have already been constructed" <sup>8</sup>. The project in Cali is called Llano Verde and has provided a home for 900 I.D.P families.

7. "IDMC » Colombia: Internal displacement in brief." IDMC » Colombia: Internal displacement in brief. N.p., n.d.Web. 22 Sept. 2014. <<http://www.internal-displacement.org/america/colombia/summ8>>.

8. "Cien Mil Viviendas Gratis: Proyecto Casas De Llano Verde/Constructora Bolivar." Reconciliación Colombia: Mas Dialogo, Mas Region, Mas Accion. Reconciliación Colombia. Web. 27 Nov. 2014. <<http://360gradosblog.com/index.php/cien-mil-viviendas-gratis-proyecto-casas-de-llano-verdeconstructora-bolivar/>>.



## ECONOMIC OPPORTUNITY

The market in the city of Cali , and in Colombia in general, functions as an area of economic opportunities. The simplest job without requiring much skill can be one of carrying grocery bags for a shopper. In this realm informality reigns and is not bound to a specific place within the city. This is because the act of selling produce can be performed on the street, park, or traffic jam.



Photo by: Parentesis Newspaper

## SOCIAL EXCHANGE

The market has historically been a place of social interaction. Beginning as public space within the main plaza of the city of Santiago de Cali ( Plaza of Caicedo) it has been a meeting point for people of different backgrounds. Individuals of different ethnicities, urban, rural, and economic backgrounds would suddenly become equal in one space. Ideas in regards to politics, personal knowledge, and town gossip would be exchanged. Its evolution into distinct forms of product vending is what will be analyzed.

## HYBRIDIZATION

In order to test out the reaches of my thesis I will fragment the components that constitute a dwelling in a chosen site close to the newly constructed site of “Llano Verde” and those that constitute a “city market” in the city and site. When the fragments have been isolated, I will hybridize them in adaptation to topographical elements of the site to generate new design intentions. This is not to forget four precedents that will be used as guidelines in generating ideas for a more precise design intention.

1

CONTEXT: MARKET + DWELLING



Photo by: Santiago Saldarriaga







## LOT PROVIDED HOUSING



### THE LOTS

In Lot provided housing, pre-organized lots are positioned in a "grid like" pattern and are then sold. Construction of the building is completely in the hands of the buyer.

Building codes tend to be violated in the creation of these homes and are rarely enforced by municipal authorities.

What results are buildings with various heights and utilization of diverse materials. Creating an organic patchwork growth.

### STAGE 1: BASIC NEEDS

The family unit typically begins construction of the home by erecting the first floor. This floor houses the basic program such as: Kitchen, One to Two Bedrooms, 1 Bathroom. In many instances the kitchen and bedrooms are all in one room.

The first floor in essence is created to meet the necessities of typical 4 person family (Parents and two Children).

### STAGE 2: PRIVATE vs. PUBLIC

Bedrooms are re-located. Sometimes one more is added to the floor plan. There is now a clear division between public spaces ( first floor) and private spaces (second floor). Garage is often built on the first floor.

The second floor of the homes are often transformed into leased apartment units. This transformation is physically manifested by the creation of outdoor stairs that provide separate entrances for each floor and maximize space.

### STAGE 3: ECONOMIC OPTIONS

The first floor is often transformed into a business that sells any kind of product. The first floor can also be leased out to anyone interested in constructing their own business.

Continuing floors are often separate apartment units or an internal expansion of the owners housing unit.

The house is often topped by a terrace holding a laundry area, lounge, terrace or outdoor space.

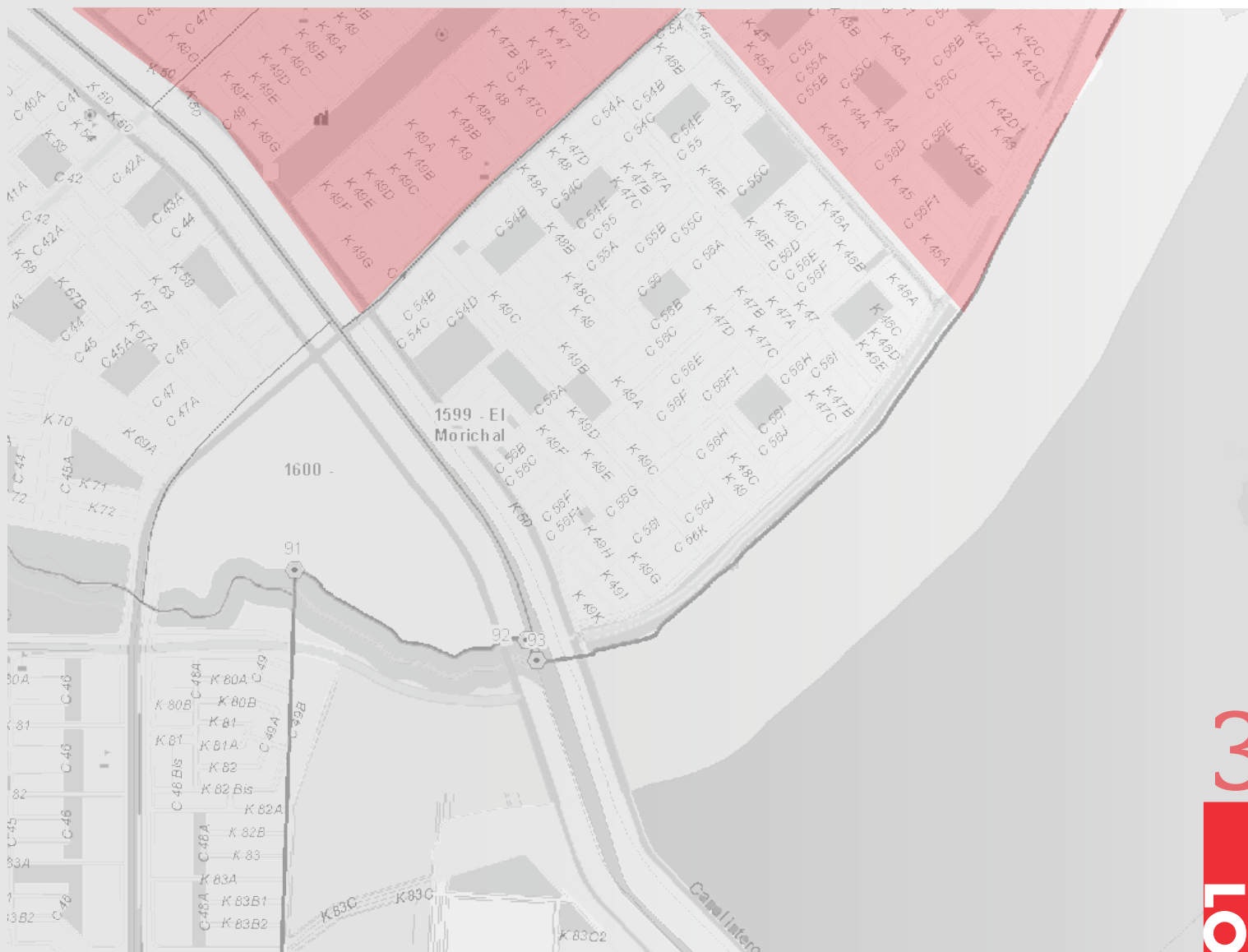
### VERTICAL CONSTRUCTION

The growth of the home, from the choice of materials to the amount of floors built is always in correspondence with the socio-economic mobility of the individual.

This means that as a family acquires more money they will build more floors, have a wider set of materials, and establish mix use program ( shops on the first floor).

The home always grows vertically as the lot restrictions are the only limits followed by the people. This is physically manifested by leaving a barren side wall. This is because it is expected that their neighbor will build a set of floors as well.

## LOT PROVIDED HOUSING LOCATION

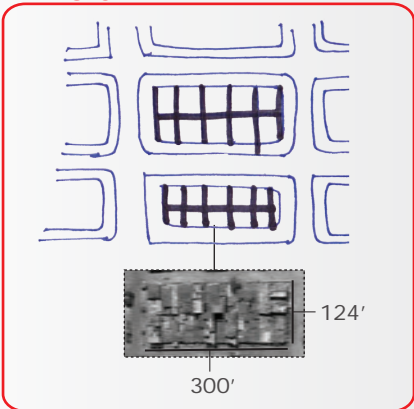




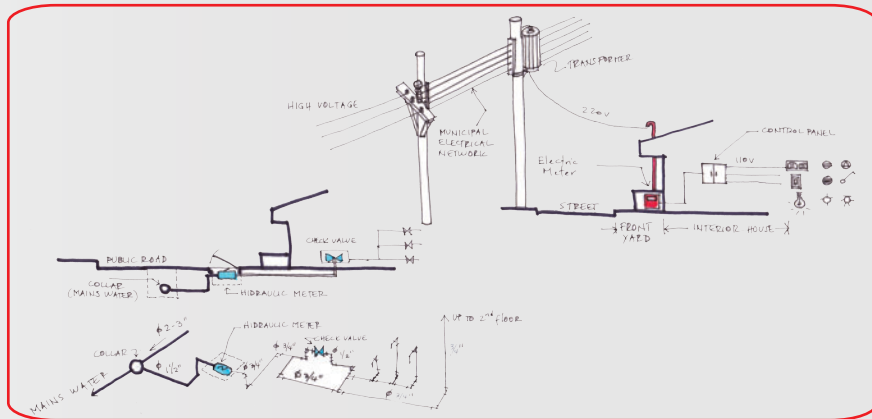
# HOUSING TYPES

# CONSTRUCTION PROCESS

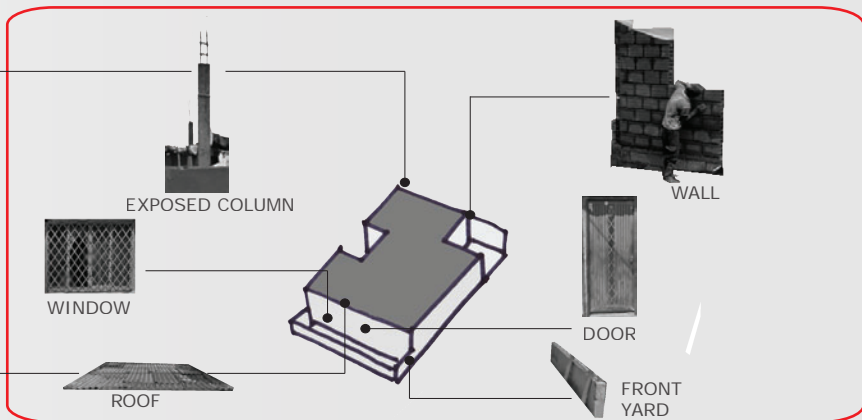
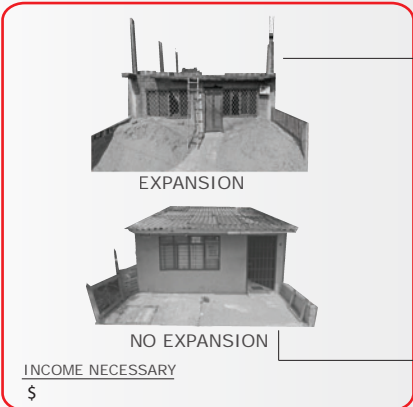
## THE LOTS



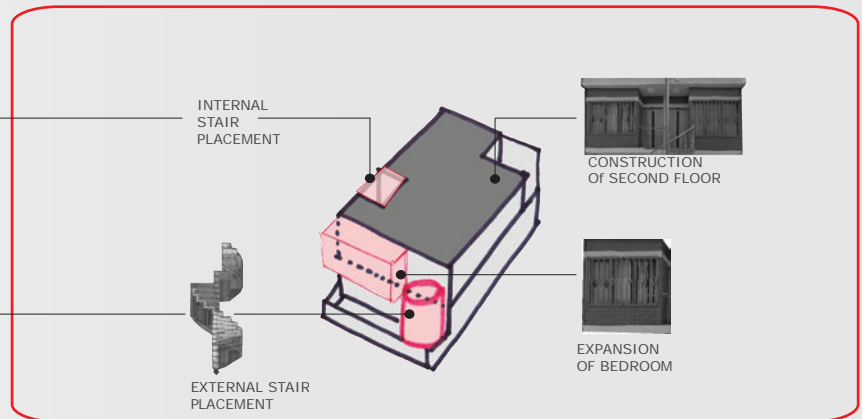
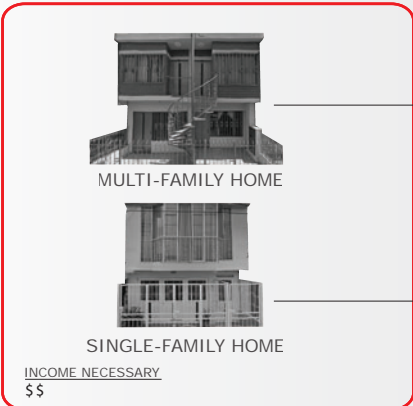
## VERTICAL CONSTRUCTION



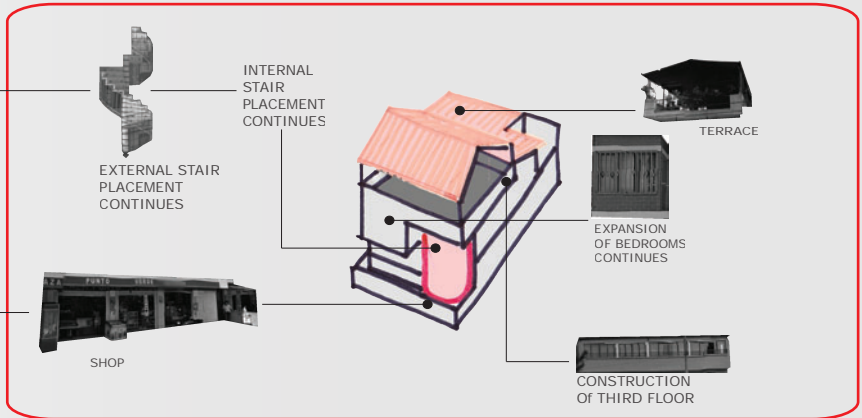
## STAGE 1: BASIC NEEDS



## STAGE 2: PRIVATE vs. PUBLIC



## STAGE 3: ECONOMIC OPTIONS



# MATERIALS

CONSTRUCTION OF SECOND FLOOR

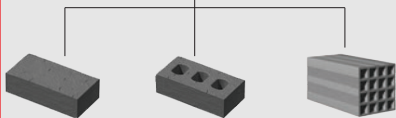
CONSTRUCTION OF THIRD FLOOR

EXPANSION OF BEDROOM

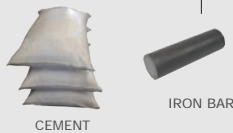
FRONT YARD

WALL

BRICK



EXPOSED COLUMN



CEMENT

IRON BAR

TERRACE

ROOF

ZINC SHINGLES

CLAY SHINGLES

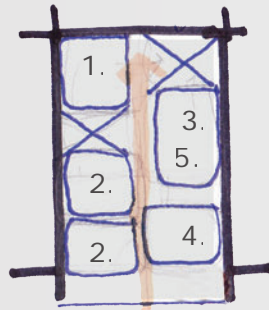
EXTERNAL STAIR  
PLACEMENT  
CONTINUES



CEMENT

# PROGRAM

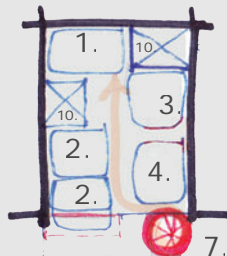
## STAGE 1: BASIC NEEDS



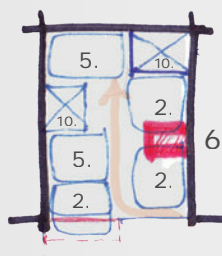
## STAGE 2: PRIVATE vs. PUBLIC

MULTI-FAMILY HOME

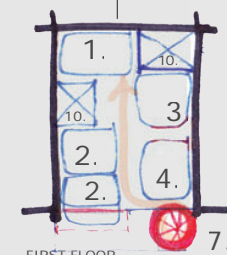
SINGLE-FAMILY HOME



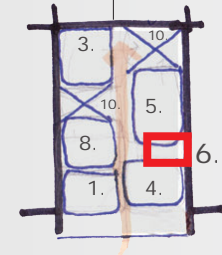
SECOND FLOOR  
BECOMES SEPERATE  
APARTMENT



SECOND FLOOR  
BECOMES PRIVATE

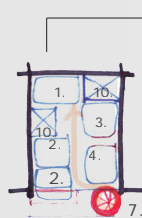


FIRST FLOOR  
BECOMES SEPERATE  
APARTMENT

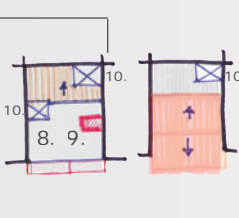


FIRST FLOOR  
BECOMES PUBLIC

## STAGE 3: ECONOMIC OPTIONS



THIRD FLOOR  
BECOMES SEPERATE  
APARTMENT



TERRACE IS CREATED  
OR LAUNDRY IS  
MOVED

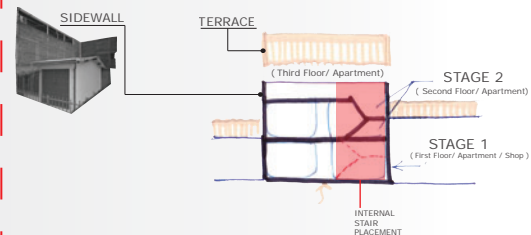
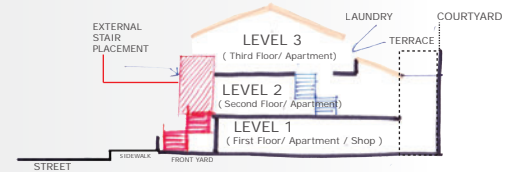
\* NOTE



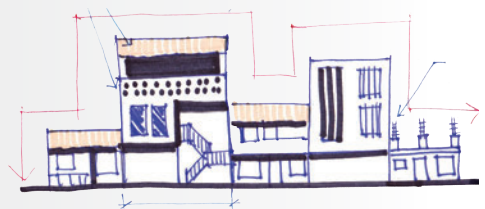
1. Bathroom
2. Bedroom
3. Kitchen
4. Living Room
5. Dining Room
6. Internal Stair
7. External Stair
8. Laundry
9. Terrace
10. Courtyard

# UNIQUE TRAIT

NARROW LOTS = VERTICAL CONSTRUCTION



IRREGULAR HEIGHTS



= GROWTH WILL  
OCCUR

EXPOSED BEAM



= MULTI-FAMILY HOME  
(APARTMENT)

EXTERNAL STAIR  
PLACEMENT

INTERNAL STAIR = SINGLE FAMILY  
HOME

INCOME REFLECTS:



CONSTRUCTION  
OF FLOORS



CONSTRUCTION  
OF SHOP



OPTION OF MATERIALS

OUTDOOR FUNCTIONS AS:



TERRACE



COURTYARD

3 LOT PROVIDED HOUSING

# COMMERCIAL HOUSING



## THE LOTS

There are two types of commercial housing; a gated community and the other an open pre-designed neighborhood.

In both cases the lots and the homes are bought by a construction company and built according to a pre-designed esthetic ordained by an architect or developer.

## CONSTRUCTION

The homes are constructed by a local or foreign construction firms. The architect is who chooses the esthetics and program in terms of materials and floor plans.

In a gated community it is not allowed to expand program through addition of more rooms or floors.

In an open pre-designed neighborhood expansion of the home through floors and or rooms is allowed but is done with consideration of the community's facade vernacular.

## MATERIALS

In both the gated/ oped homes materials are set upon construction for both inside and outside the home. However it is only in open community homes that materials are allowed to change for both indoor and outdoor construction

for both types of commercial homes materials typically reflect the inhabitants higher socio-economic level. As a result one can observe the use of stronger bricks, better roof insulating materials, and outdoor spaces such as interior courtyards, backyards, and frontyards.

## PROGRAM

Open community homes are allowed to create mixed\_use homes that adapt the first floor into community stores or bakeries.

The program of gated communities does not change. Typically, these homes have dedicated rooms. This meaning, rooms for laundry with the necessary appliances, and most homes are 3 bedrooms with 2 bathrooms. This means that the individual buying the home has no plans to expand. He/She has enough capital to buy a completed house.

Both types of homes are always to suit one family and making profit from renting a lower floor is not usual.

## SECURITY

As result of these homes pertaining to a part of society that is middle or upper middle class means they are target for robbery within the city.

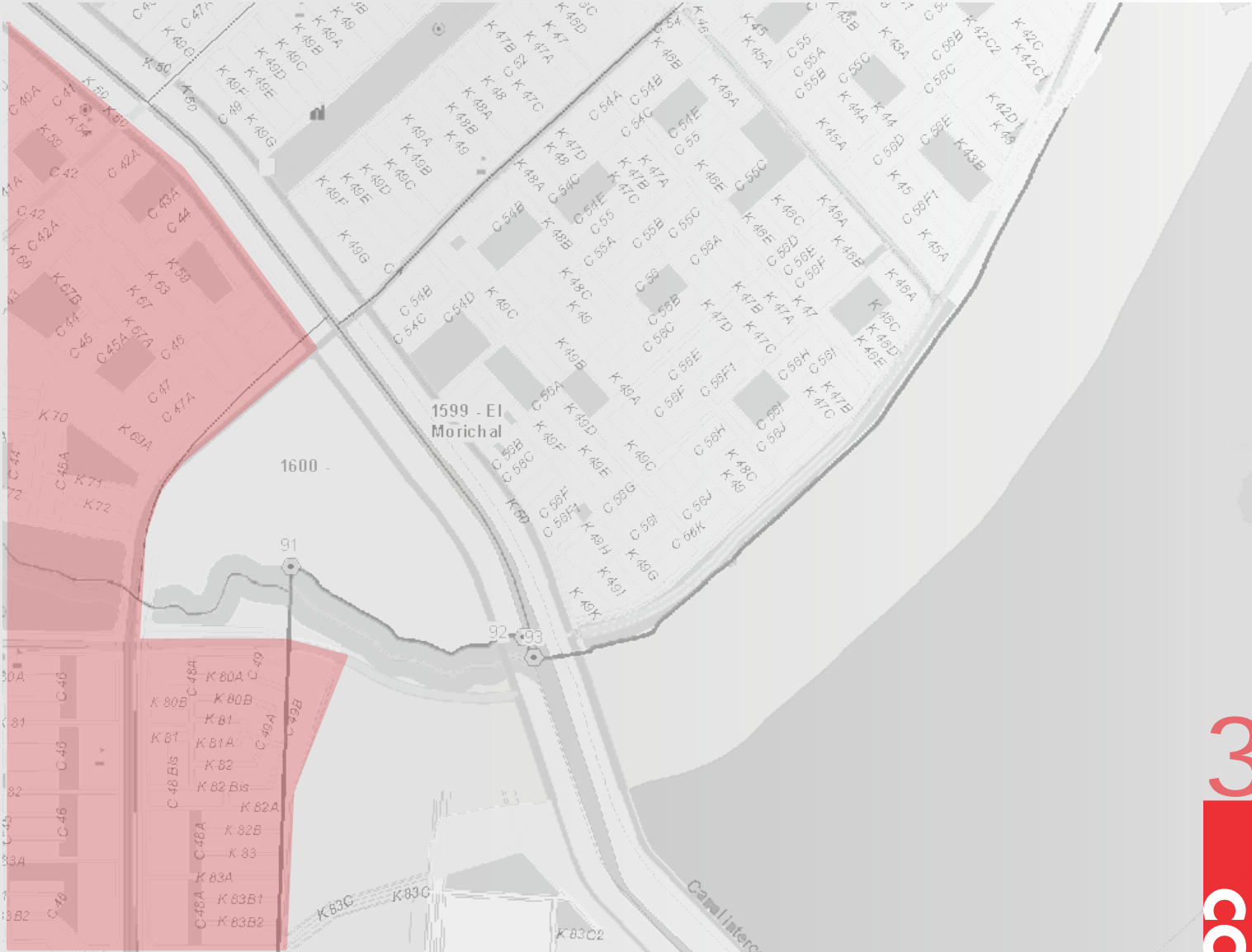
The esthetics of the homes reflect this and one can observe iron bars upon windows or framing the frontyard of the home in both the open/gated communities.

Gated communities often utilize electric fences to keep potential robbers from coming into the residential zone.

Both types of communities have security guard booths in proximity to the homes. These are typically situated close to a street or at the entrance of a gated community.

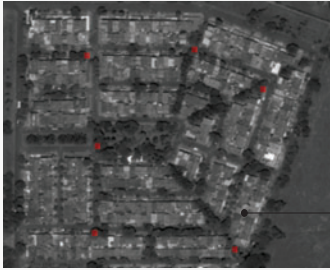


## MAP OF COMMERCIAL HOUSING LOCATION



# HOUSING TYPES

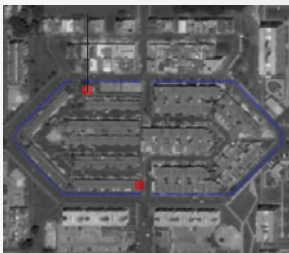
## OPEN COMMUNITY HOME



INCOME NECESSARY  
\$\$\$



## GATED COMMUNITY HOME

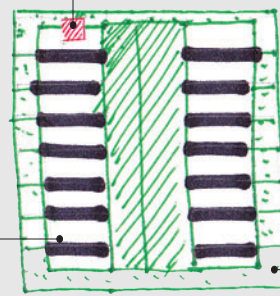


INCOME NECESSARY  
\$\$\$\$



# CONSTRUCTION PROCESS

REGULATED  
LOT PLACEMENT



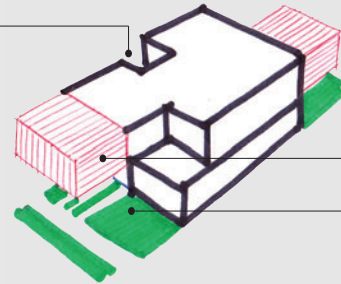
SECURITY POSTS



BOUNDARIES FRAMED  
BY VEGETATION and  
SIDEWALK DISTANCE

## OPEN COMMUNITY HOME

COURTYARD



INDIVIDUALLY CREATED  
BEDROOM EXTENSIONS

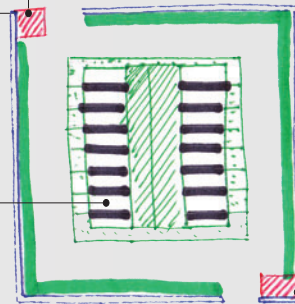


FRONTYARD



## GATED COMMUNITY HOME

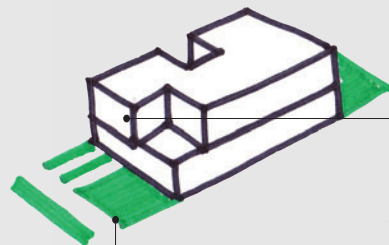
REGULATED  
LOT PLACEMENT



SECURITY GATES



VEGETATED ELECTRIC FENCE



BEDROOMS ARE SET  
NO EXTENSION IS  
PURSUED.



FRONTYARD INCLUDES  
GARAGE

# MATERIALS

## FOUNDATION



CEMENT

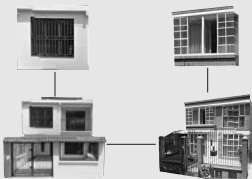
## WALLS

### BRICK



HOLLOW BRICK IS MORE EXPENSIVE

SECURITY PROVIDED BY IRON BARS ON WINDOWS AND FRONTYARDS



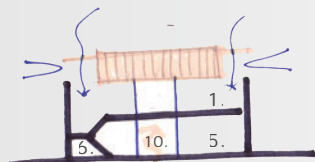
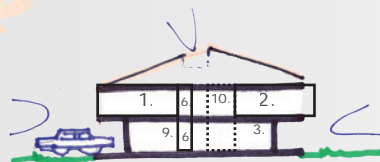
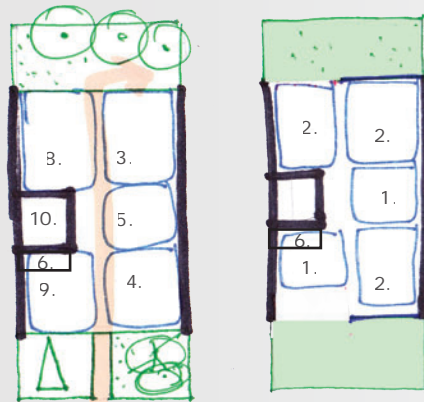
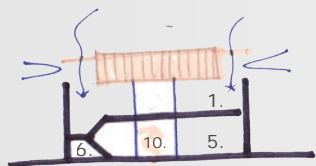
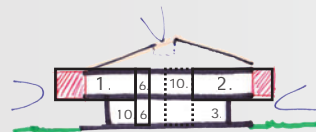
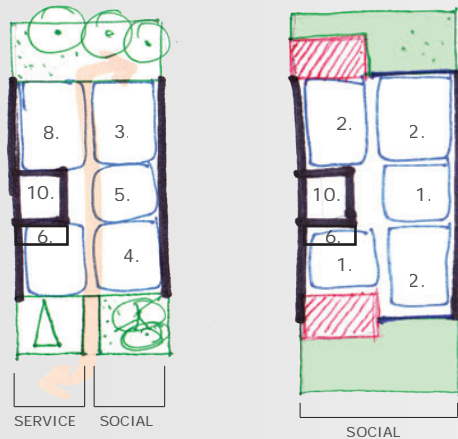
MATERIALS ARE ALLOWED TO CHANGE IN ACCORDANCE WITH ROOM EXPANSIONS

## SECURITY



ALL HOMES FOLLOW PRE-CHOSEN MATERIALS AND ARE NOT ALLOWED TO CHANGE OR ADAPT.

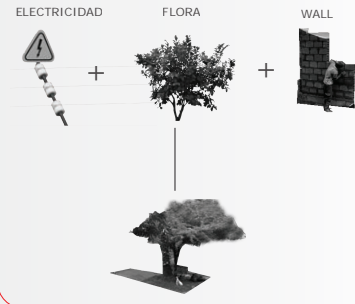
# PROGRAM



1. Bathroom
2. Bedroom
3. Kitchen
4. Living Room
5. Dining Room
6. Internal Stair
7. Laundry
8. Courtyard
9. Garage
10. Foyer

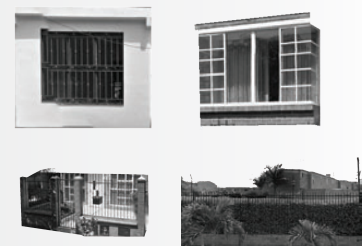
# UNIQUE TRAITS

## BOUNDARIES



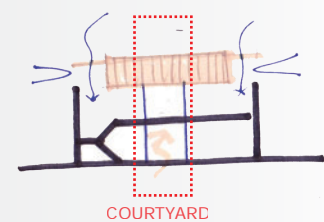
BOUNDARIES ARE DEFINED BY VEGETATION. TREES, BUSHES, AND FLOWERS. NATURE BECOMES SPACE MAKERS AND ARE CRUCIAL MATERIALS FOR THE CULTURE OF CONSTRUCTION.

## SECURITY



BOUNDARIES SET UP BY THE BUILT FORM OF THE HOME ARE FOR MEASURES OF SECURITY BUT BECOME PART OF A LARGER FACADE VERNACULAR OF BARRED WINDOWS

## INTERNAL BOUNDARIES



THE COURTYARD BREAKS THE BOUNDARY BETWEEN INDOOR AND OUTDOORS BUT MORE IMPORTANTLY IS A NATURAL FORM OF VENTILATION AND SUNLIGHT.

## MATERIAL BOUNDARIES



HOMOGENITY IN MATERIAL LESSENS THE INDIVIDUALITY OF EACH FAMILY UNIT. HOWEVER, IT IS THE FAMILY THAT CHOOSES TO BYPASS THEIR CHOICE IN MATERIALS FOR THE ARCHITECT'S KNOWLEDGE.

3

COMMERCIAL HOUSING



# I.D.P HOUSING



## THE LOTS

The land where the lots are located are completely bought by the federal government. These specific I.D.P Houses belong to national program called "100,000 free homes" which are meant to provide housing for internally displaced individuals from the Colombian countryside. This project is called "Llano Verde" or "Green Prairie".

500 homes were built to house the I.D.P families.

## CONSTRUCTION

While the construction of these homes varies per region it must be highlighted that speed of construction is of importance for all instances. As a result, concrete becomes a crucial accoutrement to the issue of time employing the help of major concrete construction companies.

## MATERIALS

The concrete construction company Argos deployed most of the concrete.

Three types of concrete were used 21 Mpa for the foundations and the floor slabs, 14MPa for the construction of columns, 17MPa for the creation of adhesive to put in place the hollow bricks that constitute the walls.

## PROGRAM

The area of each home is approximately 48m<sup>2</sup> or 157.48 ft<sup>2</sup>. The homes come with two floors, two bedrooms, living/dining room, one bathroom, and a kitchen.

Opportunities for expansion are allotted in the design by the construction of a patio in the back.

The overall community comes with outdoor vegetated areas and a central square.

Typically these homes can be adapted to fit the allocation of a store on the first floor or the creation of more floors for purpose of rent.

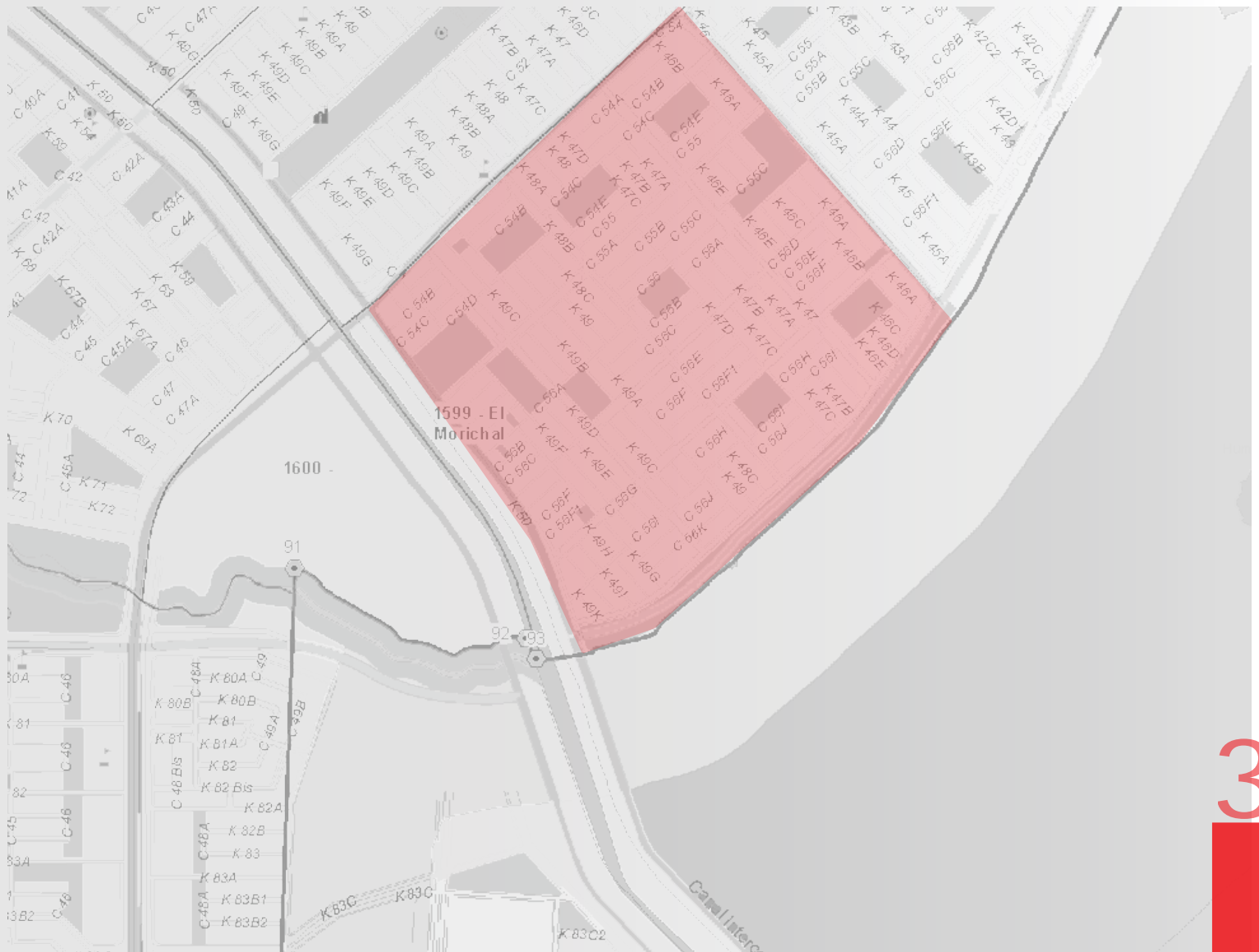
## DEMOGRAPHICS

80 percent of the families that currently live in these I.D.P homes have been displaced as result of the Colombian civil war.

Most of the families are Afro-Colombian and of Indigenous backgrounds from various parts of the country.

In total there are 4,700 families living in the "Llano Verde" community.

## MAP OF IDP HOUSING LOCATION



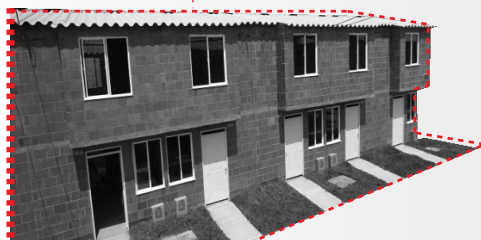
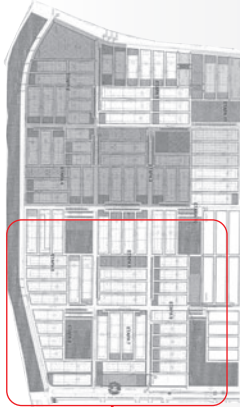
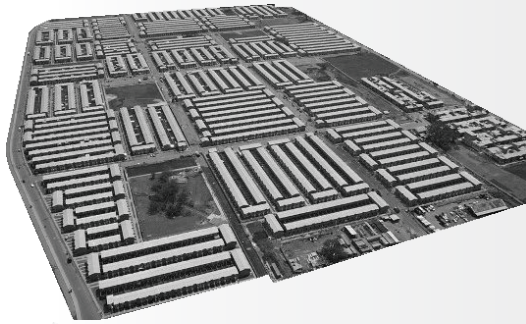
**IDP HOUSING**

3

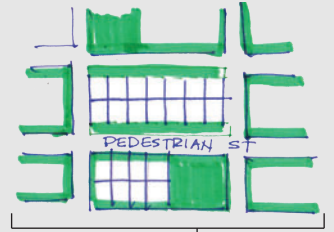
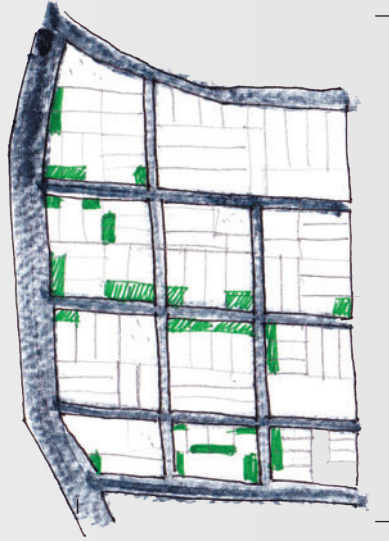
IPD HOUSING

# HOUSING TYPES

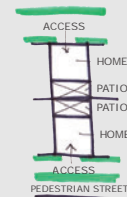
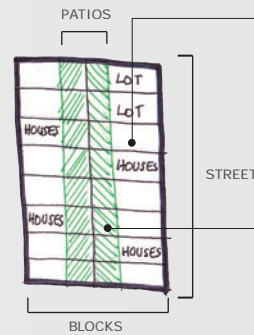
I.D.P COMMUNITY: "LLANO VERDE"



# CONSTRUCTION PROCESS



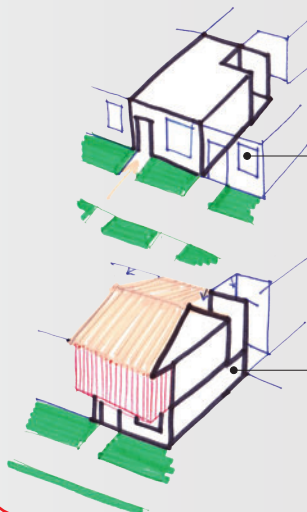
TERRAIN IS BOUGHT BY THE MUNICIPAL GOVERNMENT TO WHICH IT IS THEN CLEARED TO BEGIN CASTING OF FOUNDATIONS AND INSTALLATION OF PLUMBING AND ELECTRICAL INFRASTRUCTURE.



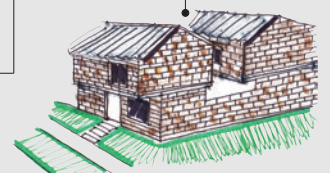
FOUNDATION IS CONSTRUCTED FOR EVERY HOME TO ORGANIZE SPECIFICS OF PROGRAM.



PEDESTRIAN STREET IS CONSTRUCTED TO MARK DIFFERENCES IN PROPERTY LINES AS WELL AS A FORM TO ALLOW VENTILATION INTO THE FRONT PORTION OF THE HOMES.



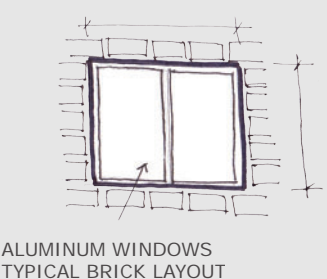
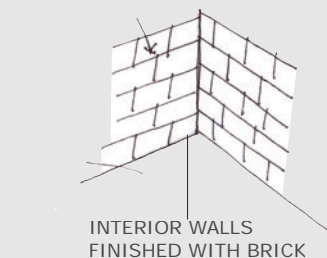
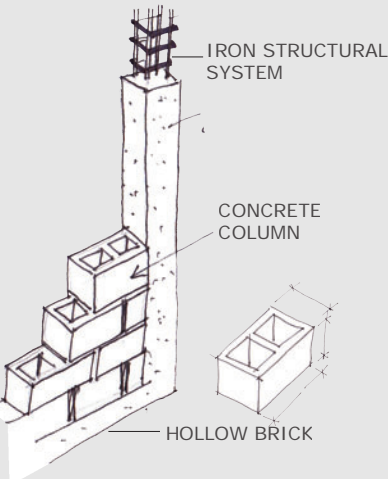
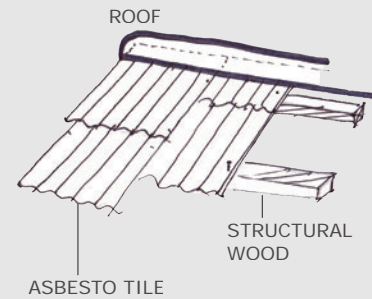
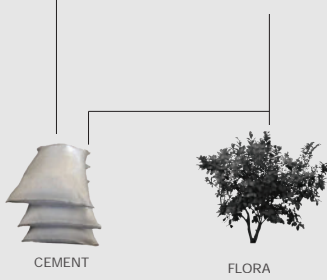
WALLS ARE SET UPON CONSTRUCTION UTILIZING RAPID BRICK PLACEMENT TECHNIQUES.





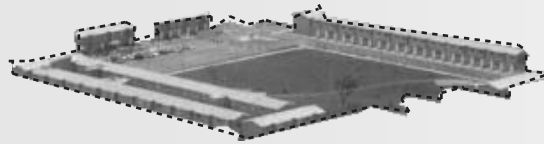
# MATERIALS

FOUNDATION PEDESTRIAN STREET

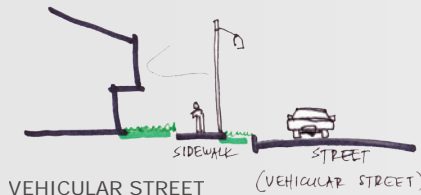


# PROGRAM

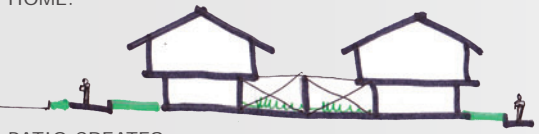
## OUTDOOR SPACES



MULTIPLE OUTDOOR VEGETATED AREAS ARE PLACED IN SQUARE PLAZA FORM THROUGHOUT THE I.D.P COMMUNITY.

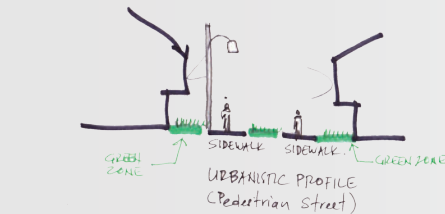


VEHICULAR STREET IS ADEQUATELY DISTANCED FROM HOME.



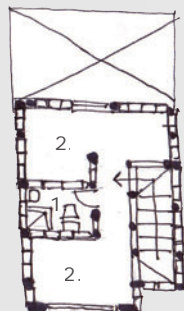
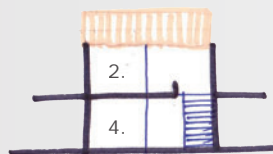
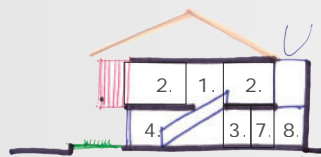
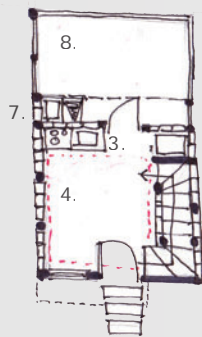
PATIO CREATES ISOLATED OUTDOOR SPACE FOR EACH HOME.

PATIO CAN BE USED TO EXPAND HOME.



PEDESTRIAN STREET CREATES OUTDOOR MEETING AREA FOR COMMUNITY.

## INDOOR SPACES



1. Bathroom
2. Bedroom
3. Kitchen
4. Living Room
5. Dining Room
6. Internal Stair
7. Laundry
8. Patio

# UNIQUE TRAITS

## COMMUNITY INTERACTION

OUTDOOR SPACES IN THIS COMMUNITY ACT AS EXTENSIONS OF THE PRIVATE HOME. THEY ARE NOT CONSIDERED PUBLIC IN TOTALITY BUT CARRY A MEANING OF PRIVACY DUE TO THE CLOSE INTERACTION THAT OCCURS BETWEEN I.D.Ps FROM DIFFERENT ETHNIC, CULTURAL, AND REGIONAL GROUPS OF THE COUNTRY.



FRONT YARDS BECOME SPACES FOR EATING AND SOCIALIZING.



PLAZA BECOMES AREA FOR COMMUNITY ACTIVITY



INHABITANT CAN CHOOSE TO HAVE A PATIO OR EXPAND THEIR HOME ONCE ENOUGH INCOME HAS BEEN ACCUMULATED.



USE OF SPACE CAN EASILY ADAPT TO THE ECONOMIC NECESITIES OF THE FAMILY UNIT.

3

IPD HOUSING



4

HOUSE MARKET

## OWNER

In house market the owner of the home is the one who typically owns the store on the first floor. However, it is not uncommon for the the owner to rent out the space for someone else who wishes to sell their own products.

## PRODUCTS

Products sold in this type of establishment are plentiful but can range from fruits and vegetables to handicraft or baked/fried goods. In essence the space functions as a shop that allows the user to sell whatever he/she can provide through their own skill or trade.

## CONSTRUCTION

The Construction of these locations typically occurs when a family unit has obtained enough money to build a second floor to their home. The brick or concrete walls on the first floor are removed leaving the concrete columns in a "loggia del pesce" fashion.

## MATERIALS

Materials are crucial in house markets because they help delineate the public spaces from the private ones. This meaning, small stepped porches are built out of concrete to mark an area where one can eat outside. half walls are also erected to mark the limits of the market from street circulation.

## PROGRAM

The program of the house market is arranged so the private spaces lie towards the back of the building. As the spaces approach the facade they become more public until reaching a frontyard condition which is typically characterized by an area of social gathering where umbrellas with outdoor seats and tables are set up.

The private spaces are typically a kitchen, bathrooms, or storage area for food. Many times these spaces connect with the second floor through internal stairs that allow vertical movement between the living spaces of the owner and his area of work.

## THE HOUSE AS WORKPLACE

Perhaps the greatest quality of these house markets are their ability to provide the owner with the means to grow economically. The market they establish is completely their decision and more often than not was transformed from a space of living into one of production.

Adaptability to the owner's need is then extremely efficient because if a family grows the market can ultimately be transformed back into a space for living that can be inhabited by the owner's themselves or rented to another family.

## MAP OF HOUSE MARKET LOCATIONS



**HOUSE MARKET**

29

4

**HOUSE MARKET**





## OWNER

The owner of the mobile market is the individual who is observed selling the product. It is the owner who makes his/her own food. The owners are typically IDPs who have no other possibilities to grow economically than selling things on the street. Areas where these individual's sell are public spaces such as parks or islands between avenues.

## PRODUCTS

Products sold typically range from distinct types of foods to handicrafts. Many times this form of market is the first step before the owner saves enough money to build/adapt his/her own space within their home.

## MATERIALS

Materials in this form of market are not typically those associated with a specific building. However, there are esthetics that serve as connotations for usage of space. One of these is the multi-colored umbrella which while made of plastic creates a portable envelope that is easily recognized by those who wish to buy a product from the vendor on a bike or stand.

## PROGRAM

The program of a mobile market is one that adapts to its context. This meaning, that the stand or cart takes the use of the surrounding space for its own commercial purpose. For example, an owner who chooses to set his/her stand near a half wall may turn this into a program of dining as clients who buy food or agricultural products typically choose to eat in close proximity to the vendor.

## PORTABILITY

The mobile market's most profound quality is its ability to re-shape space through a few to no materials. The outdoor spaces that it comes into contact with obtain another use. This is all due to its quality of non-permanence which allows free movement of the built object.

Its constant change make it an ideal instrument for the communication of users as the object itself is made to encourage social interaction. Eventually as productivity in a certain public space of the city proves more profitable the mobile market begins to gain permanence. This is because the users will seek the products the owner sells in the same area of the city and in response the owner will always be there to provide the product in demand.

## POSSIBLE LOCATIONS OF MOBILE MARKET



**MOBILE MARKET**

4

**MOBILE MARKET**



# COVERED CITY MARKET



## OWNER

The owners of the covered city market is the government of the city. Stands within the market are owned by individuals who rent the space from the city. As a result, vendors are not the owners of their space. However, this is the most ordained form of selling agricultural products within the city.

## PROGRAM

Covered city markets typically have both a set of programs that are both public and private. Public program typically deals with the organization of stands in an open gallery like space. Private spaces are typically those associated with the kitchens, storage areas, and bathrooms.

The placement of stands within the gallery space is pre-determined and non-adaptable. Their organization is based on designed user circulation patterns by part of the architect. Spaces for the loading and unloading of products are typically around the periphery of the market due to their easy street access.

Boundaries with the outdoors are quite open and are only marked when a roll up door is closed or opened.

## CONSTRUCTION PROCESS

These types of markets are built for the specific purpose of selling products from both rural and urban areas. Their construction is planned by the government and as a result is part of the formal infrastructure of the city.

## PRODUCTS

Products sold, range from agricultural produce brought from the countryside to high skilled manufactured goods like custom made carpentry.

## MATERIALS

The most common material found in the construction of these markets are concrete columns, brick walls, ceramic tiles, zinc roofs, aluminum roll up doors, and iron beams for the roof structure.

Materials typically range per market but typically choose these combinations for their low cost.

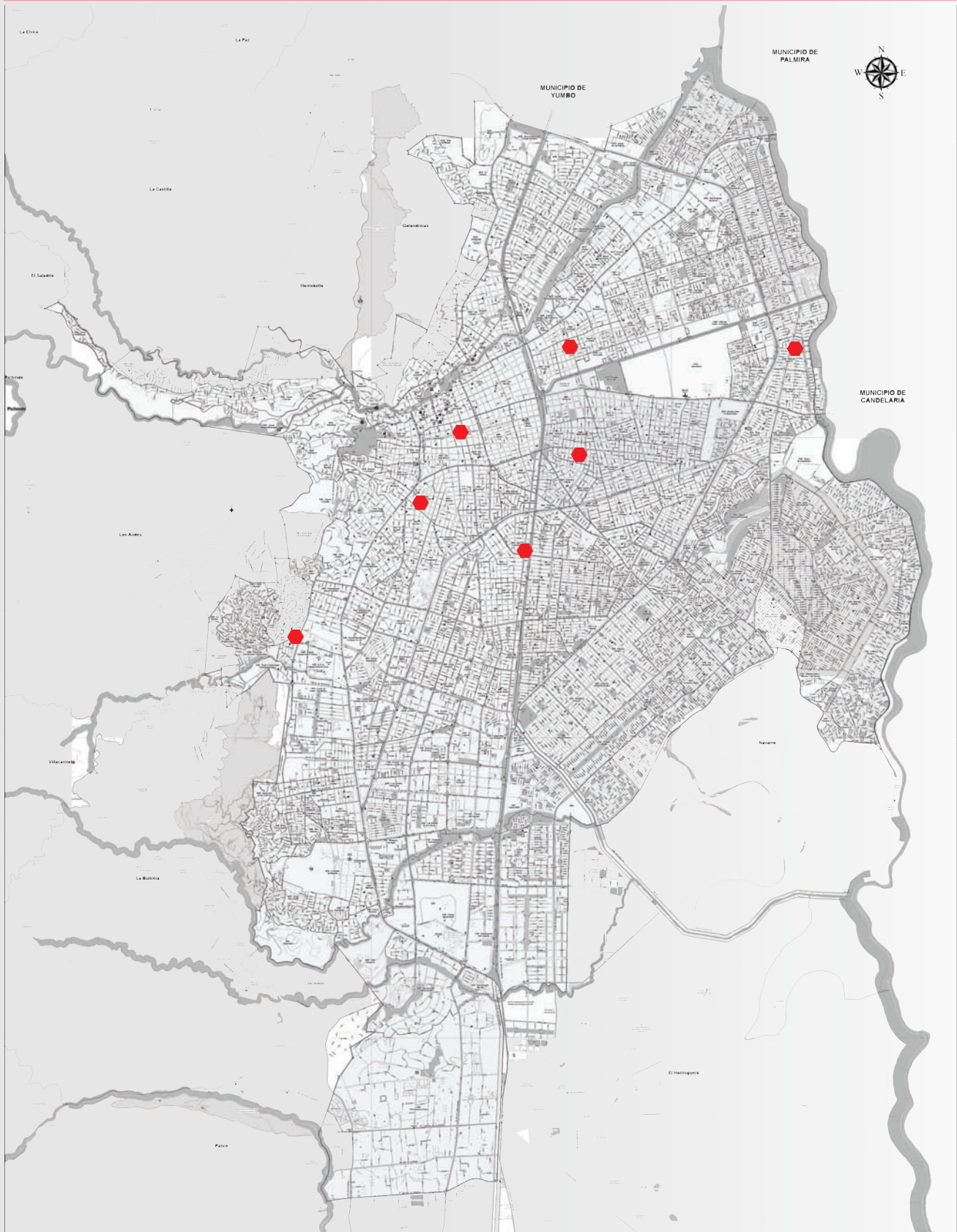
## HUB WITHIN THE CITY

The planned character of the covered city market within the city means that it is connected to the urban fabric of the city. This means that it was a part in the urban planning process of the city and as a result was designed as a hub or point of attraction.

By functioning as a hub within the city means that the market works as a public project meant to generate social interaction within the city. The covered city market is then a place of where the exchange of ideas occurs on a daily basis from the act of selling a product. This means, that through time the city market obtains a cultural connotation. In a way everyone owns the market and as a result everyone holds a sense of appropriation for it.



### LOCATION OF COVERED CITY MARKETS



**CITY MARKETS**

# HOUSE MARKET TYPES

## LOCATION



HOUSE MARKETS  
ARE TYPICALLY  
PLACED IN CORNERS.

- 1. HOUSE MARKET
- 2. URBAN BLOCK
- 3. NON-MARKET HOMES



## LEVEL 3



+

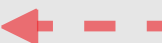
## LEVEL 2



EXTERNAL STAIRS

+

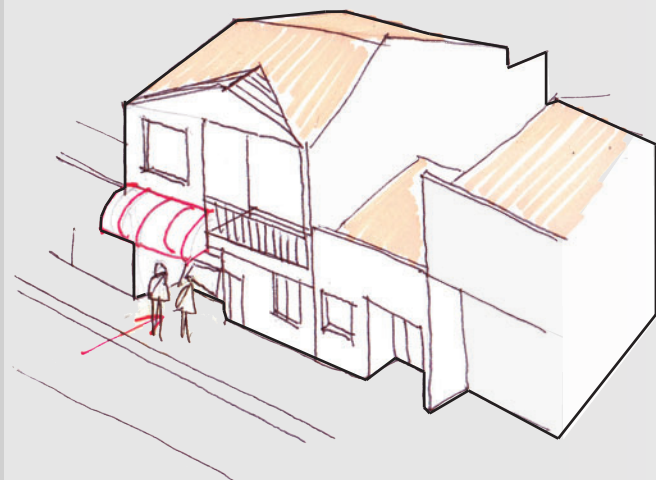
## LEVEL 1



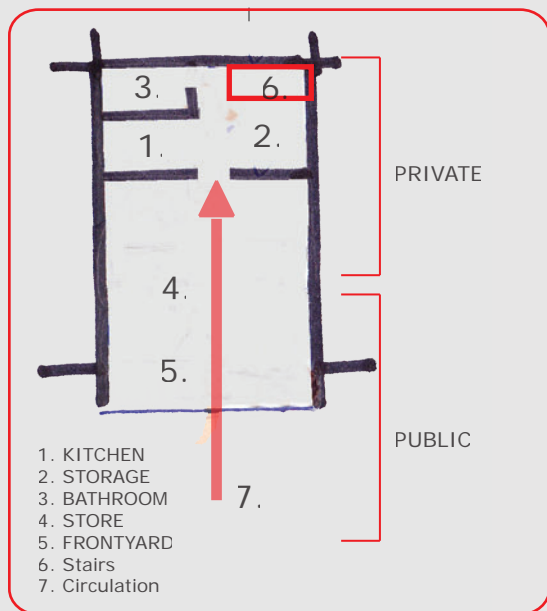
4

HOUSE MARKET

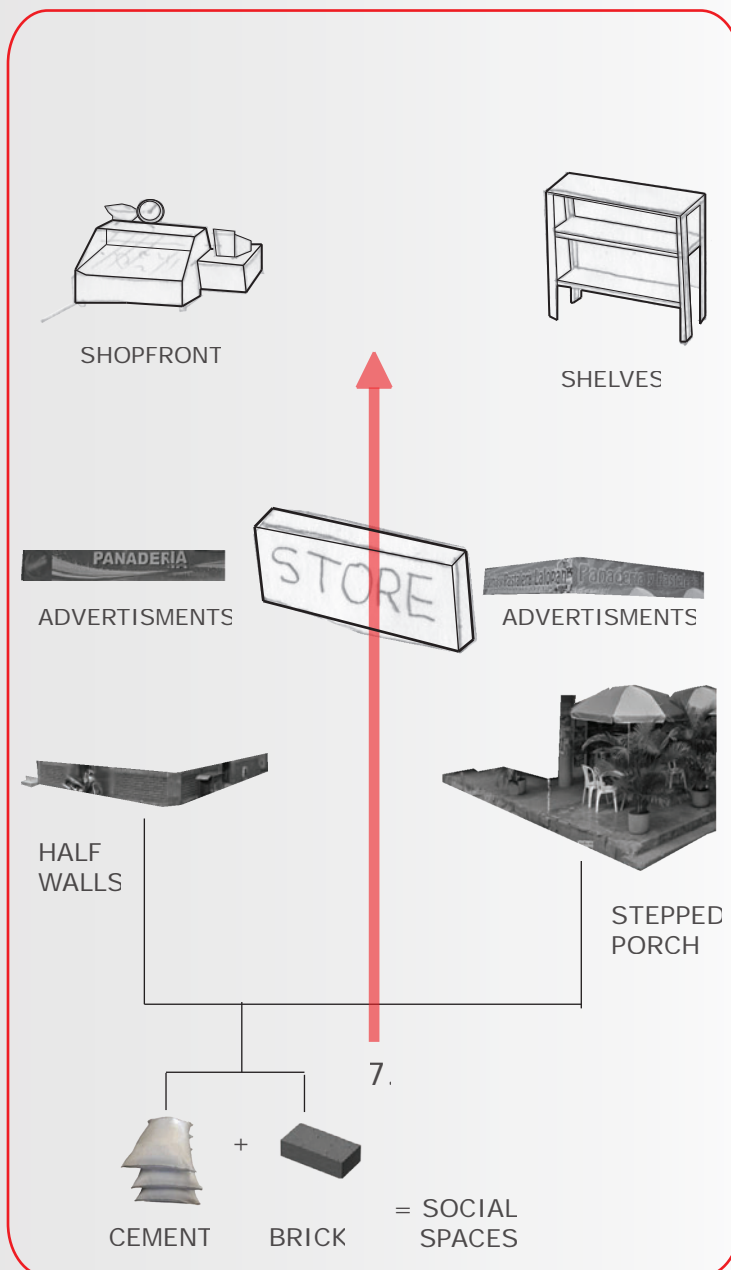




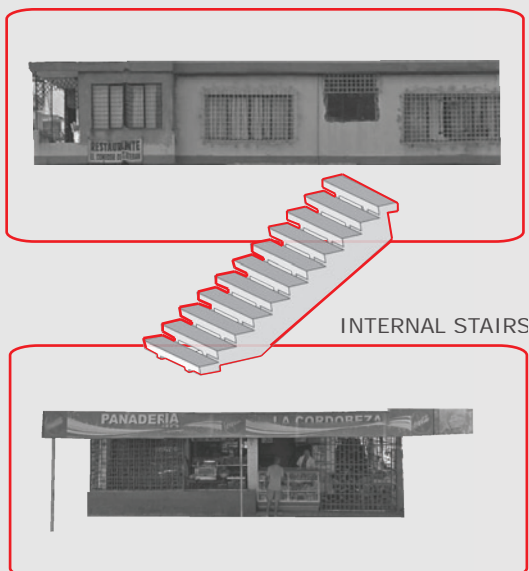
## PROGRAM



## PUBLIC + MATERIALS



## LEVEL 2



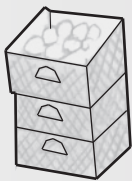


HOUSING TYPES

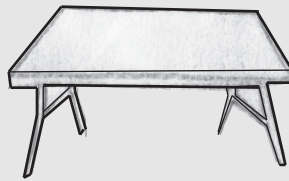
MOBILITY



+



+



+



CRATES  
WITH  
FOOD

FOLDABLE  
TABLE

FOLDABLE  
CHAIR

4

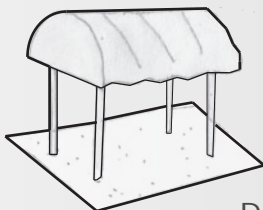


UMBRELLA

CANOPY



+



=



DEFINES  
SPACE

DEFINES  
PERMANENCE

PERMANENCE

## ZONE OF SOCIAL INTERACTION



GAIN OF  
PERMANENCE



INTERACTION  
WITH STRANGERS



SPACE OF  
SOCIAL  
EXCHANGE



PARK



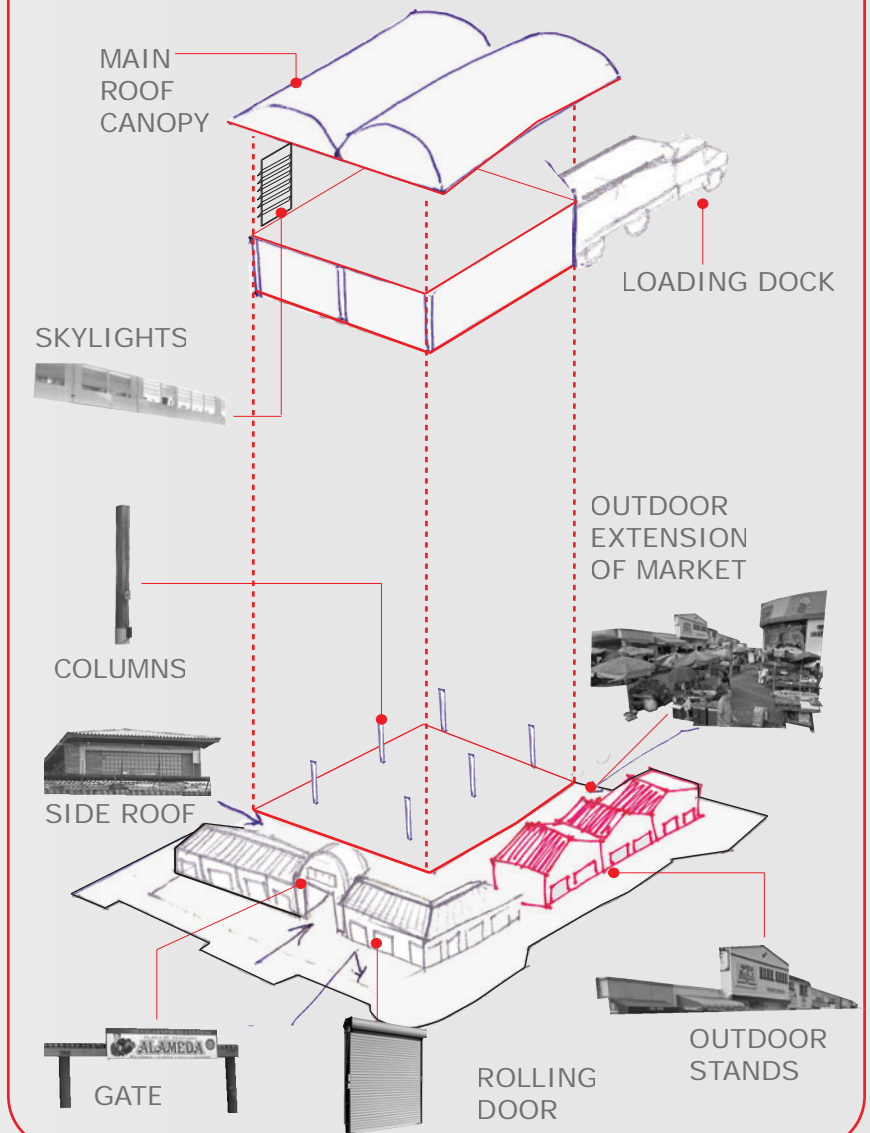
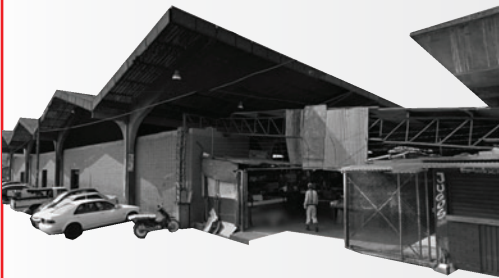
PARK MARKET

## RE-SHAPING SPACE

# HOUSING TYPES

# CONSTRUCTION PROCESS

## OUTDOOR

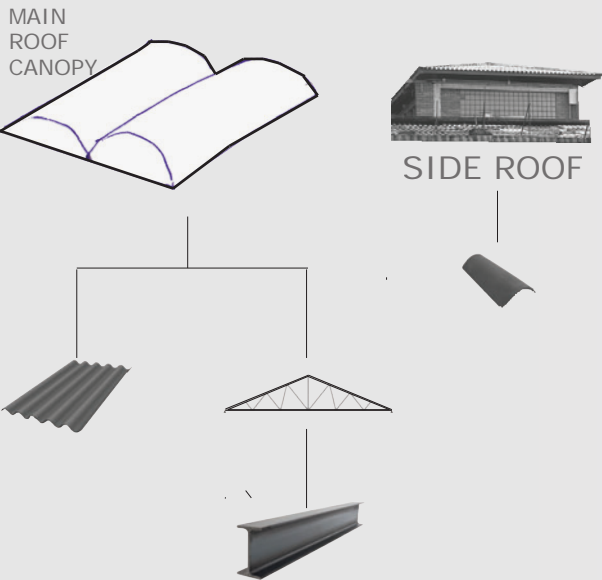


## INDOOR





# MATERIALS



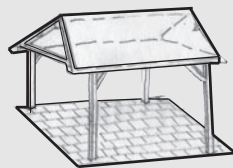
ROLLING DOOR



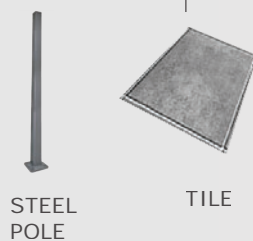
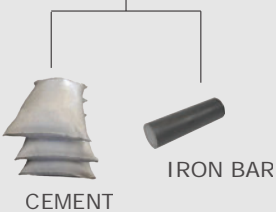
OUTDOOR EXTENSION OF MARKET



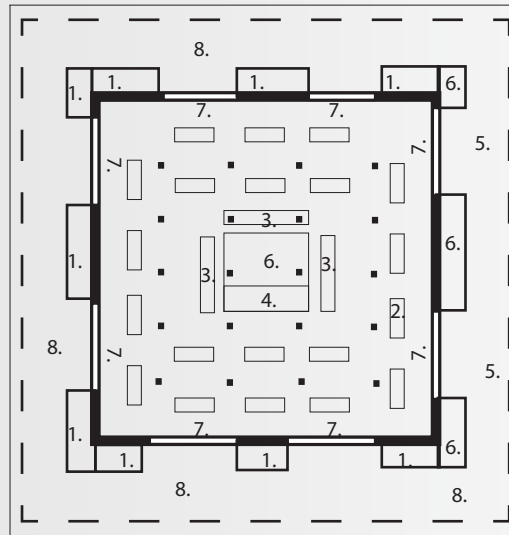
ALUMINUM



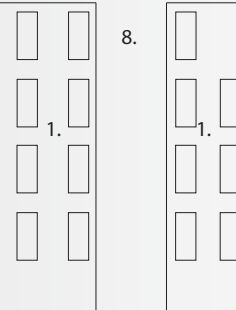
COLUMNS



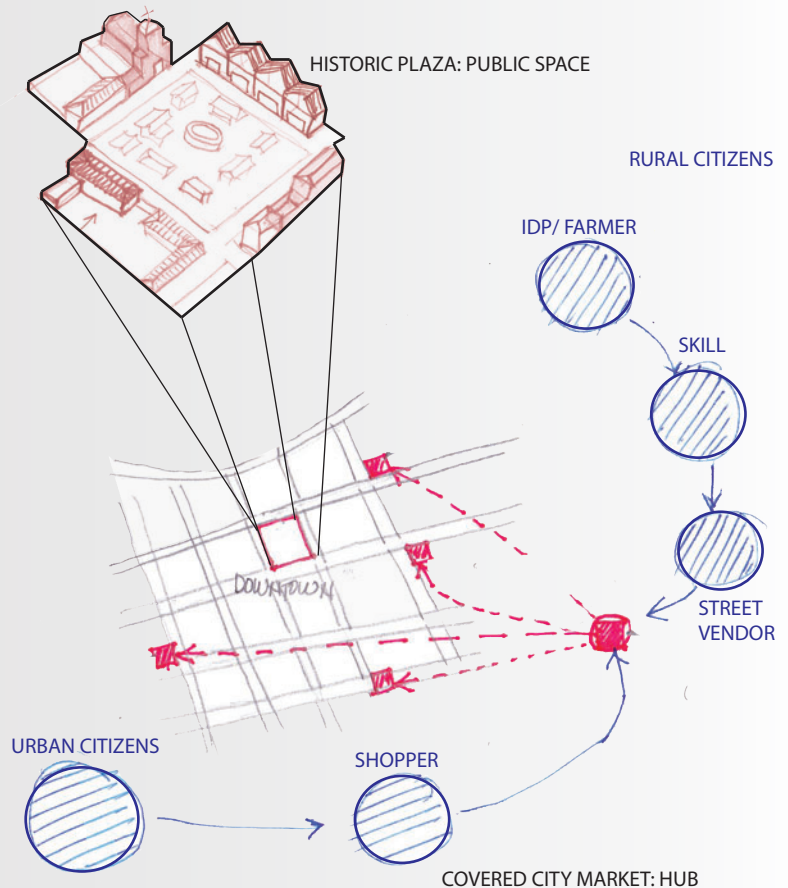
# PROGRAM



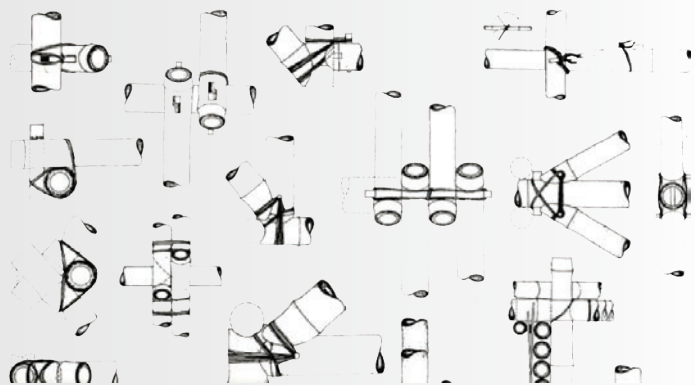
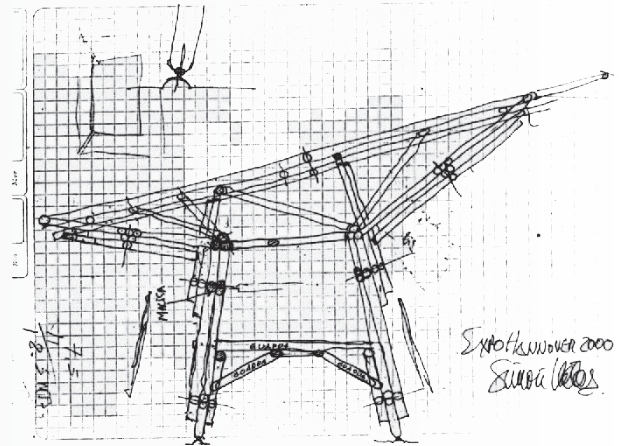
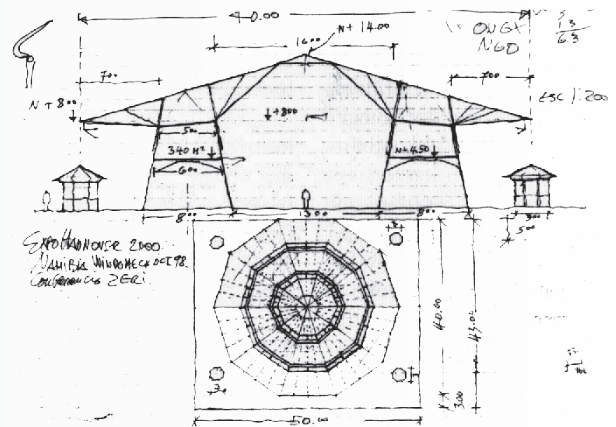
1. Outdoor Stands
2. Indoor Stands
3. Kitchen
4. Bathrooms
5. Loading Dock
6. Storage Areas
7. Rolling Door
8. Outdoor Extension of Market.



# UNIQUE TRAIT



HOUSING = VERNACULAR= GUADUA



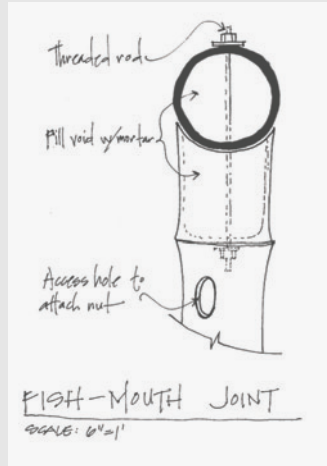
## VERNACULAR + MATERIAL

LOCATION: MANZALES, COLOMBIA

DATES: 2001- present

DESIGNERS: Simon Velez and Marcelo Villegas

CLIENTS: National University of Colombia-Manizales Subsidiary



## CONSTRUCTION

Bringing the attention to bamboo, or as it is called in Colombia guadua, as a material of vernacular construction was the prime objective of Marcelo and Simon. Guadua is a material that carries connotations of poverty as it is used in the construction of informal shelters in urban areas. What the architects want to provide is a new interpretation to this material that allows for new innovative techniques in creating joint solutions creating maximum strength in the structure of the building.

## VERNACULAR + MATERIAL

The local variety of bamboo: "guadua" is commonly used in Colombia for scaffolding when constructing a building. However, in history and during colonization it was used in the coffee region of the country as a means to replace wood, brick and stone.

## STRUCTURE

Structurally the material is very strong. However the architects managed to innovate with this system by "injecting mortar into certain joints of the system". If applied to roofing it allows the weight of the roof to increase thus creating a more secure environment for the user.

## PARTICIPATION

By concentrating efforts on the details of the material "construction method does require skilled knowledge of its use thus requiring input from an architect.



LOCATION: Lo Barnechea \_SANTIAGO DE CHILE\_ CHILE

DATES: 2001- present

DESIGNERS: ALEJANDRO ARAVENA

ELEMENTAL

CLIENTS: GOVERNMENT OF SANTIAGO



## HOUSING

Elemental is an architectural practice founded in 2000, which grew out of the desire to address the problem of social housing in Chile. Evolving from a juncture between ( La Universidad Catolica de Santiago, an oil company ( COPEC) and architect Alejandro Aravena. "With the tradition and skills of a squatter family and self-build practices the clients would be able to complete the house based on the initial framework proposed" ( Till, p. 143).

## PROGRAM

Homes are organized around a collective courtyard. The courtyard allows a hybridization of the public and private that is quite beneficial in environments that need social reparation.

Internally the homes provide for incremental growth. The homes begin with an "initial one bedroom (plus temporary bedroom on the first floor, two bedrooms and bathroom on the second floor and a master bedroom on the the third floor" .

## PROGRAM

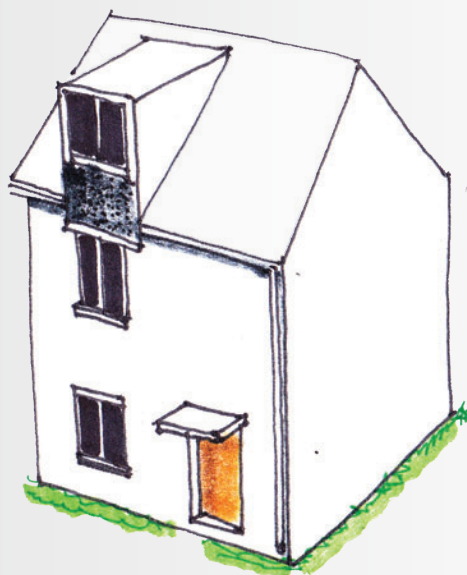
Due to the project having to fit a tight budget, rudimentary materials were used for the construction of the homes. This meaning, bricks, and a mix of concrete practices.

## PARTICIPATION

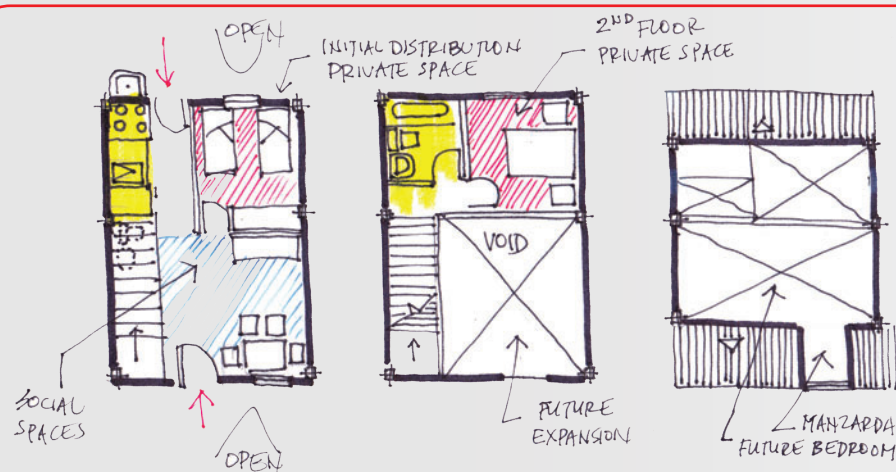
Perhaps the biggest quality of the project was the participation that was given to the users of the home. They were given options in hot water or placement of a bathtub. Furthermore, the home was left half completed for the individuals to complete as the concept of auto-construction was analyzed as an important element to the psychological stability of the user.



HOUSING BLOCK



DENSITY+ FRONTYARD= COMMUNITY ACTIVITY



EXPANSIVE GROWTH

CONTEXTUAL PLACEMENT

